



JISCM

Journal of International Surgery and Clinical Medicine



ABSTRACT

**The 4th Syiah Kuala International Conference (SKIC)
In Conjunction with**

The 5th Aceh Surgery Update International Conference (ASUIC) 2022

Theme : Reconnecting; Advances in Surgery and Clinical Collaboration



Published by:
Surgical Residency Program, Universitas Syiah Kuala

Volume 2

Number 2

July - December 2022

Page 1-61

ISSN
2807-7008



Published By :
Surgical Residency Program
Universitas Syiah Kuala

OPENING SPEECH



Assalamualaikum Wr. Wb

All praise and gratitude we say to the presence of Allah SWT for all His graces and gifts, so that we can still work in the Faculty of Medicine, University of Syiah Kuala until now. Our prayers and greetings praise to the Prophet Muhammad SAW, who brought us from the dark realms to the bright world full of knowledge.

The event of **The 4th Syiah Kuala International Conference (SKIC) In Conjunction with The 5th Aceh Surgery Update International Conference (ASUIC) 2022. This conference will be delivered a concept as Hybrid Conference will be held on October**

6th – 9th 2022, with theme Reconnecting; Advances in Surgery and Clinical Collaboratio. This collaboration event will be more wonderful with the concept of collaboration clinical practice. All aspects of the latest surgical treatment and the recent medical update will be delivered and have a deep discussion in this hybrid conference.

In this regard, I would like to express my appreciation and gratitude to the organizing committee for compiling this Final Program well, I hope this collaborative event will be our commitment to be able to work together in advancing Medical Education at Universitas Syiah Kuala. Hopefully this joint effort will always receive protection and blessings from Allah SWT. Amen.

Thank You.

Prof. Dr. dr. Maimun Syukri, Sp.PD-KGH, FINASIM
Dean of the Faculty of Medicine, Universitas Syiah Kuala



Published By :
Surgical Residency Program
Universitas Syiah Kuala

Journal of International Surgery and Clinical Medicine (JISCM) 2022, Volume 2, Number 2: 1-61

E-ISSN: 2807-7008

DOI : 10.51559/jiscm.v2i2.29

HEAD OF SURGERY DEPARTMENT FOREWORD



Assalamualaikum Wr.Wb

All praise and gratitude we say to the presence of Allah SWT for all His graces and gifts, so that we can still work in the Faculty of Medicine, University of Syiah Kuala until now. Our prayers and greetings praise the Prophet Muhammad SAW, Who brought us from the dark realms to the bright world full of knowledge.

This years, during the 40th Anniversary for Faculty of Medicine Universitas Syiah Kuala, Department of Surgery was given the trust to organized the Event of the 4 Syiah Kuala International Conference (SKIC) conjunction with the 5th Aceh Surgery Update International Conference

(ASUIC) 2022, with theme Reconnecting; Advances in Surgery and Clinical Collaboration. This conference will be delivered a concept as Hybrid Conference will be held on October 6th-9th 2022 in Banda Aceh. This collaboration event will be more wonderful with the concept of collaboration clinical practice. All aspect of the latest surgical treatment and the recent medical update will be delivered and have a deep discussion in this hybrid conference.

In this regard, I would like to express my appreciation and gratitude to the organizing committee for compiling this annual meeting conference very well, I hope this collaborative event will be our commitment to be able to work together in advancing Medical Education at Universitas Syiah Kuala. Hopefully this joint effort will always receive protection and blessings from Allah SWT. Amen

Thank you.

Dr. dr. Dahril, SpU(K), FRACS

Head of Surgery Department for Faculty of Medicine, Universitas Syiah Kuala



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CHAIRMAN FOREWORD



Assalamualaikum Wr. Wb

All Praise and gratitude we pray the presence of Allah SWT for all His grace and guidance so we can still work to help in the fields of education and humanity. With greetings and prayers we praise the prophet rahmatan lil alamin Rasulullah Muhammad SAW who has brought us from the realm of darkness to a realm full of knowledge.

This year 2022, we will organized a collaborative event between Faculty of Medicine Universitas Syiah Kuala and Department of Surgery Faculty of Medicine Universitas Syiah Kuala. The event called the **The 4th**

Syiah Kuala International Conference (SKIC) In Conjunction with The 5th Aceh Surgery Update International Conference (ASUIC) 2022. This conference will be delivered a concept as Hybrid Conference will be held on October 6th – 9th 2022, with theme Reconnecting; Advances in Surgery and Clinical Collaboration. This Hybrid conference will be attended by international and national speakers who have expertise in the field of surgery, medical education, clinical medicine and the latest information regarding Medical Education and Health Transformation from Indonesian government. This scientific event felt very special with the presence of the Bali Medical Journal Indexed by SCOPUS (Q4) and Web of Science in scientific publications for all topics presented, both in symposium and free paper sessions.

I would like to welcome all experts who are willing to attend in this outstanding hybrid conference to be resource persons at this scientific event, I would like to thank all the committees and sponsors who have helped us to make this activity a success. Finally, I also welcome all the participants, I hope you all get valuable scientific experinces in wonderful city of Banda Aceh.

Thank You
Sincerely yours,

Dr (C). dr. Yopie Afriandi Habibie, Sp. BTKV Sub JD(K) FIHA, FICS, FACS
Chairman



Published By :
Surgical Residency Program
Universitas Syiah Kuala

Journal of International Surgery and Clinical Medicine (JISCM) 2022, Volume 2, Number 2: 1-61

E-ISSN: 2807-7008

DOI : 10.51559/jiscm.v2i2.29

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Published By :
Surgical Residency Program
Universitas Syiah Kuala

Journal of International Surgery and Clinical Medicine (JISCM) 2022, Volume 2, Number 2: 1-61

E-ISSN: 2807-7008

DOI : 10.51559/jiscm.v2i2.29

SPEAKER

Modern surgical curriculum: australian perspective

Glenn Guest

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Chair of the Victorian and Tasmanian subcommittee for General Surgical training

The Royal Australasian College of Surgeons was established in 1927 and has had the sole responsibility of training surgeons in Australia and New Zealand. Surgical training is now subdivided into 9 subspecialties with the largest cohort being General Surgery. Recently a major review resulted in changes to the training program which aim to update the training and assessment pathways that are now implemented for all new trainees and aim to provide a better structure and framework for both trainees and the surgeons and educators who perform the assessments. This talk outlines the key features of this new training program focusing on Entrustable Professional Activities (EPA) and Procedural Base Assessments (PBA) and how they integrate into surgical training in Australia.

Keywords: RACS, Surgical Training, Entrustable Professional Activities (EPA), Procedural Base Assessments (PBA).

Management of multiple fractures in polytrauma patients and trauma care system from Korean Trauma Registry

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Trauma care service is evolving to meet the demand and aim high outcomes throughout the world resulting from rapidly increasing rates of mortality and morbidity related to external injuries. The regional trauma centers in South Korea has been designated to sixteen university hospitals from 2012 to provide comprehensive care for trauma patients. The Ajou university hospital trauma center, which was established in 2013, functions as a level 1 trauma center and admits over 3,000 major trauma patients per year, serving as the busiest trauma center in South Korea. It is located in South Gyeonggi province, where has the largest population about 9.7M. More than 1,000 poly-trauma patients (ISS>14) were treated and about 3,000 surgeries are performed each year. Polytrauma patients are likely to combined multiple fractures, open fractures in extremities, ischemic limb or unstable pelvic bone fracture. The fracture patterns are commonly highly communitied with severely damaged soft tissue coverage. In case, the capabilities of general orthopaedic surgeon might be limited to care

those patients who require high end fracture repair service. Optimal resources at such a trauma center would include more than four orthopaedic trauma surgeons who are an expert at fracture treatment with trauma-board-certified specialists. Ultimately, this ideal trauma center would serve as a total resource dealing with the fracture combined polytrauma patient with improvement of outcomes.

Keywords: trauma care, South Korea, orthopaedic, trauma surgeon.

Quality care and raising the bar for pediatric trauma care

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Childhood trauma has become a major cause of mortality and morbidity, disability and socio-economic burden and it is expected by the World Health Organization (WHO) that by 2020 it will be the number 1 disease globally. The WHO and UNICEF have published their third World Report on Child Injury Prevention in December 2008.

The resource-adapted introduction of trauma care protocols, regionalized care and the growth specialized centers for trauma care within each low-and-middle-income countries (LMIC) are key to improved outcomes and the lowering of trauma-related morbidity and mortality globally. Resource limitations in LMICs make it necessary to develop injury prevention strategies and optimize the use of locally available resources when injury prevention measures fail. This will lead to the achievement of the best possible outcomes for critically ill and injured children. A commitment by the governments in LMICs working alone or in collaboration with international non-governmental organizations (NGOs) to provide adequate healthcare to their citizens is also crucial to improved survival after major trauma. The increase in global conflicts also has significantly deleterious effects on children, and governments and international organizations like the United Nations have a significant role to play in reducing these.

In the implementation of emergency management, ideally the emergency room, operating room, ICU, Lab, blood bank and imaging examination, such as; US, MSCT are in the same room. In addition, each emergency team must understand their respective duties and have a pediatric trauma center that has an education standardized approach to management of trauma patients; such as ATLS course and PALS course.

The first peak of death occurs on the scene (e.g. motorway)-only prevention can impact this mortality (government policy). The second peak occurs in the minutes to hours (golden hour) rapidly assess the injuries, determine management priorities, provide critical interventions assesment and management simultaneously. The third peak of death occurs days to weeks after the initial injury- MOFS/MODS, SIRS (pediatric expertise)

Keywords: quality of life, outcome, management.

Positive outcomes of alternative treatment for toxoplasma encephalitis in AIDS patients: a case report

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Introduction: Opportunistic infections, such as toxoplasmic encephalitis (TE), are more common in AIDS patients because of their weakened immune systems. In HIV patients, toxoplasmic encephalitis presents as a serious neurological crisis. Sulfadiazine with pyrimethamine is the recommended initial treatment for toxoplasmic encephalitis.

Case description: A 32-year-old Acehnese man presented to the emergency room with a two-week history of fever and white patches on his tongue and oral cavity. He also experienced a seizure. After a thorough evaluation, the patient was diagnosed with toxoplasmic encephalitis. The patient was given the alternate regimen medication of cotrimoxazole (960 mg twice daily) and clindamycin (600 mg four times daily). After six weeks of alternative therapy, clinical improvement was observed. The patient was able to speak fluently, his appetite improved, he no longer experienced seizures, and he resumed normal activities.

Conclusion: We have reported a case of toxoplasmic encephalitis which was treated with cotrimoxazole and clindamycin as part of an alternate treatment for toxoplasmic encephalitis. Clinical improvement was used to assess the success of alternative therapy in patients with TE. The first-line treatment for toxoplasmic encephalitis is pyrimethamine and sulfadiazine. However, cotrimoxazole and clindamycin can be used as an alternate therapy if this first-line treatment option is not available.

Keywords: toxoplasmic encephalitis, AIDS, cotrimoxazole, clindamycin, alternate therapy.

RFA; New horizon for thyroid nodule

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Introduction and importance: Thyroid nodules are one of the most common thyroid disorders and are estimated at 4–7 % in the general population. Although it is estimated that 95 % of thyroid nodules are benign and only 4.0–6.5 % malignant, a combined assessment of clinical data, ultrasound imaging, FNAB and core biopsy is needed to estimate the risk of malignancy. From our data patient visit in our center showing some of patients have huge thyroid tumor. Among this patients hesitate to visit and consult to doctor due to the truth that they have to undergo neck surgery procedure for their thyroid. this patients have believe that neck surgery have many complication and cloud be endangerous their life. this condition will put the surgeon in difficult position struggling in thyroid surgery. Another solution we can over to our patients were minimal incision thyroid surgery with endoscopy. Although these solution can not bring our patients to come in earlier and not able to negate patient worrines

about this thyroid surgery. Another methode that we can over to our patients was thyroid ablation using heat power including laser ablation (LA), microwave ablation (MWA), and radio- frequency ablation (RFA). due to affordable expences, this procedure using local anaesthesia and minimal incision mak this procedure easely to accept our patients and to adadpt by our center. RFA procedure become procedure of choice for benign thyroid management in our center. this method had been used to treat thyroid nodules and reported to have good efficacy and safety for treating benign thyroid nodules and recurrent thyroid cancer. This paper aims to provide the efficacy and safety of the RFA procedure in benign thyroid lesions. From the cases of thyroid nodule patients who underwent RFA procedure. After the procedure, patients were followed up at the first, third, sixth, and twelfth months. The volume reduction ratio in the first, third, sixth, and twelfth months was as follows 81.6%; 76.89%; 63.48%, 60.11%. complications occur only in 1 case with reversible laryngeal nerve injury. Which improved after 10 days without treatment intervention. However, RFA has several limitations, including a highly operator-dependent procedure to maximize its efficacy, the possibility of persistent lesions, and the lack of a final histological diagnosis that does not completely rule out aggressive histologic variants.

Conclusion: The RFA procedure has minimal side effects, is highly effective, and the procedure time is short.

Keywords: RFA Procedure, Thyroid Nodules, New Horizon

Recurrent pregnancy loss: update in management

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Management of recurrent pregnancy loss (RPL) is a challenge. This can be frustrating for both the patient and the clinician. Although clinically miscarriage occurs in 15-25% of pregnancies, only 1-3% of losses can be attributed to RPL, a disorder defined as two or more consecutive pregnancy losses prior to 24 weeks. Some identifiable etiology include chromosomal abnormality, endocrine disorder, cervical insufficiency, antiphospholipid antibody syndrome (APS), thrombophilias, immunologic abnormalities, and environmental causes. Although a comprehensive evaluation has been carried out to rule out these causes, 50% of the causes of RPL remain unknown.

Diagnostic evaluation should include maternal and paternal chromosomal analysis, assessment of the uterine anatomy, and evaluation for thyroid dysfunction, APS, and thrombophilias. In some women, evaluation for insulin resistance, ovarian reserve, antithyroid antibodies, and prolactin disorders may be indicated.

The management is multifactorial including lifestyle modification, psychological support and specific treatment of any identified cause. In vitro fertilization with preimplantation genetic diagnosis is recommended for patients with balanced translocation, surgical correction for anatomic abnormalities and correction of endocrine disorders. Anticoagulants, including aspirin and low molecular weight heparin (LMWH) have been used in cases of APS. Lifestyle advice include limiting alcohol and caffeine intake, stopping smoking, and maintaining a healthy exercise and body weight. In cases of unexplained RPL, progesterone has been shown to be beneficial in decreasing the miscarriage rate in women who had experienced at least 3 losses and women with a history of one or more miscarriages and vaginal bleeding. Antenatal counseling and psychological

support should be offered, as these measures have been shown to increase pregnancy success rates.

Prognosis will depend on the underlying cause for pregnancy loss and the number of prior losses. Patients should be reassured that, despite a diagnosis of RPL, around 70% of patients will achieve a live birth in their next pregnancy.

Keywords: pregnancy loss, management, progesterone.

Open fracture: ORIF or OREF?

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It has been a challenge for all orthopedic surgeons to manage open fractures. Due to the exposure of the fracture site to the environment, there is an increased risk of infection, nonunion, delayed union, neurovascular complications, and increased amputation rate. One hundred and fifty years ago, mortality was common following open fractures.¹ With the advent of modern therapy, however, the expected outcome has improved dramatically. The standard principles that must be followed to achieve a satisfactory result in the management of open fractures are good wound irrigation, complete debridement, appropriate antibiotic coverage, and early bone stabilization. Various classification systems have been proposed to grade the extent of the initial injury and offer useful prognostic clues to help in deciding the optimal management. The most widely used is that of Gustilo and Anderson which describes three groups of increasing severity based on the size of the open wound, the degree of its contamination and the extent of soft-tissue injury.

The treatment of open fractures requires the simultaneous management of both skeletal and soft-tissue injuries. The method of fixation selected depends on the degree of contamination, time from injury to operation and amount of soft-tissue damage. These will be analysed separately, based on the evidence of the current literature. Definitive stabilization is done either by external fixators or by internal osteosynthesis. Regarding the external fixator, it was the most widely used implant. Currently, the use of external fixators is no longer a mainstay in the definitive management of open fractures due to the high rate of infection of the pin site and the potential risk of vicious callus and it does not provide adequate mechanical stability of the fracture. Griffin et al. suggested the external fixator for definitive stabilization of fractures is better when there is a significant amount of bone loss. Regarding internal fixation, the screw plates, the Kuntscher's nail intramedullary was the type of nail used before 2019. Singh et al. in their study on the Analysis of the rates of infection and non-union in open fractures of the tibia Gustilo IIIB did not observe any difference in the time the union between intramedullary, extramedullary implants, and the external fixator used as the final fixation, and no difference was also observed in terms of infection. The external fixator may be exchanged for internal fixation at the time of definitive wound cover as long as: (1) the delay to wound cover is less than 7 days; (2) wound contamination is not visible; and (3) internal fixation can control the fracture as well as the external fixator.

Post bone surgery rehabilitation

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Postoperative fracture patients will immobilize for some time to give the body time to repair. Loss of load on the bones and muscles will be fatal to weakening the structural strength of bones and joints. Muscles will atrophy due to sarcopenia. Not to mention if the muscle is torn or ruptured, of course it will require a longer recovery time.

Post-surgery rehabilitation returns the body's functions to a functional condition before surgery. The success of medical rehabilitation measures is closely related to orthopedic surgery techniques, the tissue that is operated on, the sterility of the action, the strength of the tools that are installed, the place where the organ is operated, and the motivation of the patient. According to the literature recovery is classified as soft tissue and tendon + 6 weeks. While bone + 12 weeks. But this really depends on the above mentioned earlier.

The role of rehabilitation ensures that the stages of function return are in line with the tissue healing process. Do not make the postoperative condition worse. Early mobilization is known to speed up the healing process but improper early mobilization treatment can prolong the treatment period. Rehabilitation measures include mobilization, increasing range of motion, strengthening muscles, giving proper assistive devices and many other things. Sensory disturbances should also be considered, especially in post-traumatic patients because medical rehabilitation has contraindications to sensory disturbances. Giving the load Exercise must be with the right dose in order to help stimulate bone and muscle strengthening. For this reason, weight-bearing must be done gradually so that the results obtained are not counter-productive.

Keywords: rehabilitation, fracture, immobilization, recovery.

Graves disease: medical treatment perspective

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Graves Disease (GD) is the most frequent cause of autoimmune thyroid disease (AITD) which predominantly attacks women. Until now, there are 3 main therapeutic modalities of GD including Antithyroid Drugs, Active radioiodine therapy (RAI) and thyroidectomy that can be optimized from the beginning of the diagnosis. OAT is a GD therapy that is currently more widely chosen by clinicians today. This therapeutic modality generally aims to normalize thyroid hormone levels ahead of a thyroidectomy (Cooling Down) or as a long-term therapy to get a remission condition. Methimazole is the first choice OAT in all but GD; in first-trimester pregnant conditions, thyroid crisis or allergy to methimazole. Treatment with OAT is generally divided into 3 therapeutic models in the form of dose titration, long-term fixed dose and Block & Replacement Therapy models. In adult patients, the dose titration model and Block & Replacement Therapy model are the main options; in adolescent patients, the dose titration model is more preferred. In the dose titration therapy model, OAT was administered from an optimal dose of 10 – 30 mg of methimazole to normal thyroid hormone levels and then dose titrated to the smallest dose of 5 mg interval a day as the smallest dose.

Meanwhile, in the Block & Replacement Therapy model, methimazole was given at a larger dose to get slightly lower thyroid hormone levels, followed by the administration of exogenous thyroid hormone (Levothyroxine). The second method commonly used in the Block & Replacement Therapy model is to administer methimazole and levothyroxine simultaneously from the beginning

of the diagnosis. OAT can be stopped at least with the smallest dose over 6 months while thyroid function remains normal.

Keywords: graves disease, antithyroid drugs, management

Palliative radiation therapy

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Nowadays, cancer remains a major health issue and is a major contributor to disease burden worldwide. The International Agency for Research on Cancer (IARC) estimates that 1 in 5 people will develop cancer in their lifetime. Cancer patients may experience various complaints or symptoms, particularly in advanced stage cases and distant metastases and can reduce their quality of life.

The treatment of cancer consists of 3 main clinical modalities: surgery, chemotherapy and radiation therapy. Those clinical modalities complement each other as multimodality therapy. Radiation therapy is a clinical modality dealing with the use of ionizing radiations in the treatment of patients with malignant neoplasias. This modality delivers a precisely measured dose of irradiation to a defined tumor volume with as minimal damage as possible to surrounding healthy tissue, resulting in eradication of the tumor, a high quality of life, and prolongation of survival or palliation of symptoms.

Radiation therapy is a significant modality for palliation of symptoms in advanced stage tumors, especially in cases of bone pain due to metastases, extraosseous spread with infiltration or compression of nerve structures, metastases to visceral organs, pathological fractures, uncontrolled bleeding, and superior vena cava syndrome. Palliative radiation therapy is effective in reducing symptoms and increases subjective well-being. The goals of palliative radiotherapy centered on either restoration, such as through improving quality of life or minimizing pain. This overview focuses on the role of radiotherapy in palliative setting.

Keywords: palliative, cancer pain, radiation therapy, symptoms.

Update in retinoblastoma: the recent treatment

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Retinoblastoma is the most common intraocular primary malignant tumor in children with incidence of 1:14.000-1:20.000 live births. The most common initial sign is leukokoria (white pupil) described as a glow, glint, or cat's eye appearance. Other presentations include vitreous hemorrhage, hyphema, ocular or periocular inflammation, glaucoma, proptosis, and pseudohypopyon. The first goal of retinoblastoma must be preservation of life, then preservation of eye, and finally preservation of vision.

The management of retinoblastoma can be complex, and it is impossible to establish firm rules regarding treatment. There are several options available for retinoblastoma treatment. The selected method should depend on the size and extent of the tumor, whether there is unilateral or bilateral involvement, and the patient's systemic status. Lasers have played a central role in the treatment of retinoblastomas since the very start of the laser era. The handling of intraocular retinoblastoma currently incorporates a combination of different

treatment modalities, including enucleation, chemotherapy, photocoagulation, cryotherapy, external beam radiation therapy, and plaque brachiotherapy.

Photocoagulation can be used as local primary therapy and consolidation treatment following primary systemic chemotherapy to eliminate the tumor cells that were resistant to or were not inactivated by primary therapy. Photocoagulation alone, as local primary therapy, appears to be an appropriate method of management in cases where the tumor is small in diameter

Keywords: Retinoblastoma, photocoagulation, intraocular tumor.

Multiple coronary disease PCI or surgery?

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In multivessel coronary artery disease (MVCAD), myocardial revascularisation can be achieved by percutaneous coronary intervention (PCI) or coronary artery bypass grafting (CABG), with complete revascularisation on all diseased coronary segments or with incomplete revascularisation on selectively targeted lesions. According to current international guidelines, PCI is generally preferred in single-vessel disease, low-risk MVCAD or isolated left main disease; whereas CABG is usually recommended in patients with complex two-vessel disease, most patients with three-vessel disease and/or non-isolated left main disease. In patients with MVCAD, the choice of revascularisation modality should depend on a multifactorial evaluation, taking into account not only coronary anatomy, the ischaemic burden, myocardial function, age and the presence of comorbidities, but also the adequacy of myocardial revascularization.

Keywords: Coronary artery bypass grafting, multivessel coronary artery disease, percutaneous coronary intervention,

CABG for triple vessel disease, long term result

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Data are lacking on the outcomes of patients with severely reduced left ventricular ejection fraction (LVEF) who undergo revascularization by percutaneous coronary intervention (PCI) or coronary artery bypass grafting (CABG). The SYNTAX trial was initially published in 2009 and remains the landmark study for decision-making and risk stratification of complex CAD. Both the initial trial with 1-year follow-up and the numerous sub-studies within the 5-year follow-up have been published with a primary outcome of a composite of major adverse cardiac and cerebrovascular events. In all of these studies, CABG demonstrated fewer major adverse cardiac and cerebrovascular events compared with PCI. Long-term follow-up of patients with coronary artery disease suggests CABG surgery results in significantly better clinical outcomes when compared with PCI, with investigators concluding the surgical approach should remain the preferred method of revascularization for young patients with three-vessel disease. Treatment strategy did not affect survival in one-vessel and two-vessel disease, but bypass surgery offered an improved survival in the first 8 years in patients with three-vessel disease. These results

are consistent with most previous reports and the survival benefit should be taken into account when selecting a strategy for this patient group. At 10 years, no significant difference existed in all-cause death between PCI using first-generation paclitaxel-eluting stents and CABG. However, CABG provided a significant survival benefit in patients with three-vessel disease, but not in patients with left main coronary artery disease. Patients with severely reduced LVEF, higher rates of mortality and MACE were seen in patients who received PCI compared with those who underwent CABG. The findings may provide insight to physicians who are involved in decision-making for these patients.

Keywords: Triple vessel disease, CABG, PCI, Long term result

Left main disease the role of PCI in diabetic patient

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Diabetes mellitus (DM) is one the strongest risk factors for cardiovascular disease, 14-21% patient with DM is a recognized predictor of adverse outcomes in patients with coronary artery disease (CAD). And at an advanced stage CAD which later became to ischemic heart disease, Is the main global cause of death, Accounting for >9 million deaths in 2019 according to the World Health Organization (WHO) estimates. Patients with DM have more extensive and complex CAD and have worse outcomes after percutaneous coronary intervention (PCI). There is no exception for the left main (LM) coronary arteries. Due to the significant myocardial territory at risk, which can range from 75% to 100% depending on the dominance of the left coronary circulation, left main coronary artery disease (LMCAD) heralds a higher prognosis risk.

When deciding the best course of treatment for patients with LMCAD, Need the heart team discussion is required for optimal comprehension and handling. Current clinical practice guidelines from both the American College of Cardiology/American Heart Association (AHA) and the European Society of Cardiology (ESC) recommend revascularization for all patients with $\geq 50\%$ stenosis of the left main coronary artery (LM), regardless of symptomatic status or associated ischemic burden. Previous studies have stated that the treatment of percutaneous coronary intervention (PCI) in LM disease cases still shows a low level of evidence. Along with improving non-surgical therapeutic options, the introduction of a new generation of Drug Eluting Stents (DES), and a resurgence of recent research elevating PCI to a higher level of evidence, including changes to the most current recommendations, PCI is now more effective the same as Coronary Artery Bypass Graft (CABG). A recent UK study also mentioned that the impact of DM on mortality outcomes following LMCAD PCI was only significant in the insulin-treated patients.

However, systematic review of studies and meta-analysis still shows, superiority of CABG to PCI for LMCAD in DM patients for major adverse cardiocerebrovascular events, but with the development of myocardial revascularization. not only for CABG, now PCI has a place for favorable cases. Therefore, on this occasion, we evaluate the need for a discussion of PCI in the situation of LMCAD with diabetes, Because the cardiac team discussion could determine the appropriate steps to determine the follow-up action for PCI or CABG.

Keywords: left main, diabetes, coronary intervention.

Heart failure remains a leading cause of morbidity and mortality globally: The new 2022 AHA/ACC/HFSA

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Heart failure (HF) guideline provides recommendations based on contemporary evidence for the treatment of patients with HF. It endorses not only the new definition of HF but also highlights new directions in prevention. It emphasizes the potential of the new recommended quadruple therapy for heart failure with reduced ejection fraction (HFrEF), specifically: renin-angiotensin-aldosterone system (RAAS) inhibition (with the ARNi compound being preferred); evidence-based beta blocker; mineralocorticoid antagonist (MRA); and Sodium-Glucose Co-Transporter-2 Inhibitors (SGLT2i) (without the requirement of diabetes). Moreover it introduces first-ever truly effective therapy for heart failure with preserved ejection fraction (HFpEF), which is SGLT2i.

When considering adjunctive treatments for HF, the guideline provides a separate assessment and recommendation for HF including ivabradine, vericiguat, digoxin, polyunsaturated fatty acids, and potassium binders for each specific scenario. Further evolved in this new guideline are statements addressing the usually encountered comorbidities such as aortic stenosis and mitral regurgitation, both primary and secondary; atrial fibrillation; and disparities in vulnerable populations.

Over the last decade, the developments in HF care have resulted to better patients outcome. Now with this new guideline, the outcome should be even better at least for the time being.

Keywords: Heart Failure, Morbidity, Mortality

Heart rehabilitation after coronary reperfusion

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Acute coronary syndrome (ACS) can result in high morbidity and mortality rates and cause a significant burden on society. One of the best technologies for the treatment of ACS is coronary reperfusion.

Coronary reperfusion, either by percutaneous coronary intervention (PCI) or coronary artery bypass surgery (CABG), is simply the process of opening a blocked artery. It does not improve the underlying process (atherosclerosis) and risk factors that trigger coronary occlusion. Very often there is intense restenosis or graft stenosis in the months or years following the intervention. Cardiac rehabilitation (RJ) is a comprehensive approach to provide primary and secondary prevention for cardiovascular patients. Because of its importance and benefits, CR is highly recommended in the latest ESC and AHA guidelines and the Indonesian Heart Association guidelines (Class IA recommendation).

The RJ program is divided into 3 phases: the first phase starts when the patient's condition has stabilized, the second phase starts 1-2 weeks after outpatient treatment, is carried out in the hospital, and the third phase is carried out in the community for independent patients. The RJ program generally consists of physical exercise, education, consultation and lifestyle changes.

RJ is part of a comprehensive secondary prevention program aimed at improving the overall quality of life and morbidity and mortality in patients with heart

disease. RJ has an important role along with timely reperfusion strategies and an optimized lifestyle and pharmacological therapy in contemporary approaches to patients with post ACS. Prior data, including randomized trials and systematic reviews, have established the positive impact of RJ and its significant role in reducing morbidity and mortality in patients with post-ACS. Other known benefits of RJ include increased exercise capacity and quality of life and positive effects on coronary endothelial function, blood pressure, insulin resistance and inflammatory markers.

Keywords: cardiac rehabilitation, ACS, coronary reperfusion, Angioplasty, CABG

Abdominal compartment syndrome

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Abdominal compartment syndrome (ACS) is a clinical condition in which elevated intraabdominal pressure (IAP) / intraabdominal hypertension (IAH) leads to impaired end-organ perfusion of the viscera and kidneys, causing gut ischemia and renal insufficiency. IAH also causes elevation of the diaphragm with resultant respiratory embarrassment and decreased cardiac return to the heart leading to decreased cardiac output and further deterioration in end-organ perfusion. The ultimate result is multiple system organ dysfunction and death if not appropriately diagnosed and treated. The onset of ACS can be insidious or fulminant. WSACS conference defined IAH as a sustained or repeated pathological elevation in intraabdominal pressure ≥ 12 mmHg and defined ACS as sustained intraabdominal pressure ≥ 20 mmHg associated with new organ dysfunction/failure. The standard gold treatment of ACS is decompressive and laparotomy.

Keywords: abdominal, compartment, decompressive, laparotomy.

Management of colorectal cancer

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Colorectal cancer (CRC) is uncontrolled and abnormal cell growth which starts in the colon or rectum that can form a mass of tissue. CRC usually begins as a noncancerous polyp that can become cancerous tumor overtime. CRC is the third leading cause of death and the third most common cause of cancer worldwide. Determining the stage is very important for all cancers including CRC as it may help plan patients' treatment and estimate their prognosis. As treatment of CRC is based on its stage, it is important to define stages of CRC before starting the treatments. Additionally, managing CRC in some stages also depends on tumor markers as some cancers are responded with target therapy with biological agents. Stage I of CRC is treated with surgery, stage II with surgery and tumor markers that defines treatment course. Stage III is treated with surgery and adjuvant chemotherapy. Stage II and III are no role for biological therapy. However, in stage IV tumor markers should be defined for treatment course and biological agents are the standard treatment in this stage. Additionally, multimodal treatment is often indicated in stage 4 of CRC.

Keywords: colorectal cancer, staging, target therapy.

The role of colonoscopy in diagnosis colorectal cancer

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Colorectal cancer (CRC) is the second leading cause of cancer death in the United States. In the World (2020)147.950 new CRC cases. 53.200 have died of the disease. In US (2021)104,270 new cases of colon cancer and 45,230 new cases of rectal cancer, in Asia (2018) 1,849,518 estimated new CRC cases and 880,792 CRC-related deaths, in Indonesia (2011)1407 cases of rectal cancer and 990 cases of colon cancer in the year. Many cases arise from premalignant lesions (adenomas) which may be identified and removed prior to becoming frankly malignant. For over a decade, colonoscopy has been the preferred modality for both CRC screening and prevention in the World. Early reports suggested that procedure colonoscopy screening imparted a 90% risk reduction for colorectal cancer. Subsequent studies showed that estimate to be overly optimistic. While still an outstanding CRC screening and detection tool, colonoscopy has several important limitations. Some of these limitations relate to the mechanics of the procedure such as the risk of colonic perforation, bleeding, adverse consequences of sedation, and the inability to detect all colonic polyps. Other limitations reflect issues with patient perception regarding colonoscopy which, at least in part, drive patient non-adherence to recommended testing. Screening colonoscopy is of potential benefit to patients in two ways. First and most commonly, it can detect and facilitate removal of precancerous polyps. Several studies have shown that colonoscopy with polypectomy is effective at decreasing CRC. In addition, a negative colonoscopy, if of sufficient quality, has a high negative predictor value for CRC development which is some studies extends to 20 years. Second, colonoscopy may detect cancers at an early stage where there is a higher chance for cure than in those discovered in a more advanced stage. The future of colorectal screening will ultimately depend on numerous factors. These include cost, efficacy, acceptability, and insurance coverage of the various options. It may well be that some combination of tests, such as colonoscopy with interval fecal DNA testing, will provide the optimal risk/benefit ratio, provided that costs can be lowered in to an acceptable range.

Keywords: Colonoscopy, Adeno Carcinoma, Colorectal Screening

The right way to treat burns according to dermatologists

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Burn injuries are an underappreciated traumatic event that can happen to anybody, anytime, anywhere. Burn injuries are a serious medical issue that can result in infection, mortality, and other catastrophic complication. Burns can be caused by flames, hot liquids, solids, chemicals, electrical, radiation, and cold. Burns are classified according to the depth of the wound. Healing in burn patients includes five phases, namely phase one (initial assessment and triage), phase two (fluid resuscitation), phase three (wound healing), phase four (supportive and critical care), and phase five (rehabilitation). In addition to fluid therapy, currently, there is a specificity of burn treatment according to dermatologists, namely the provision of topical therapy (wound dressing, stem

cells, platelet-rich plasma, skin graft) and scar therapy (laser therapy). It is hoped that these new modalities can improve the quality of life and reduce the morbidity and mortality of burn patients.

Keywords: burn injury, dermatologist, management.

Reconstruction following tumor ablation; from A to Z

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Reconstruction of soft tissue and bony defects following various types of tumor ablation is a fairly complex surgery. The specific attention to form and function becomes very important to restore patient's quality of life and their function in the community. Regardless, understanding the basic principles of reconstruction is the main key to achieve a favorable result. In Indonesia, especially in Cipto Mangunkusumo General Hospital – Jakarta, patients come in variable state of tumor. As a surgeon, identifying the defect's extent, component, and nature is essential in deciding the most suitable modality for each patient. Simple reconstruction with locoregional flaps may be executed for small to moderate lesions. However, many patients come in advanced stage of tumor. Although some may be benign, it requires total removal of such large amount of tissue. In these cases, free flap from various donor areas would serve as the best option for reconstruction, with 95% success rate and high patient satisfaction (using FACE-Q appearance score and appearance distress score).

Nevertheless, free oncologic margin serves as an important foundation for constructing a reliable structure. It is helpful to work hand-in-hand with other surgeons to acknowledge any further oncologic therapy and determine the reconstruction goals. Clinical decisions will be challenging, yet beneficial for the patient's interest.

Keywords: tumor ablation, reconstruction.

Continuous ambulatory peritoneal dialysis in chronic kidney disease; is it the best treatment?

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Chronic kidney disease (CKD) is a condition of decreased function or anatomy of the kidney that occurs for more than 3 months regardless of the underlying causes. CKD is one of the leading causes of mortality and morbidity worldwide. Long-term treatment of end-stage kidney disease (ESKD), the terminal stage of CKD, is through dialysis (hemodialysis or peritoneal dialysis) and kidney transplantation. Peritoneal dialysis (PD) uses the peritoneum in a person's abdomen as the membrane in which fluid and dissolved substances are exchanged. It removes excess fluid, correct electrolyte problems, and removes toxins in ESKD patients. Peritoneal dialysis has better outcomes than hemodialysis during the first couple of years. Other benefits include greater flexibility and better tolerability in those with significant heart disease. Complications may include infections within the abdomen, hernias, high blood sugar, abdominal bleeding, and blockage of the catheter. The use of PD is not

possible in those with prior abdominal surgery or inflammatory bowel disease. It requires some degree of technical skill to be done properly. In peritoneal dialysis, a specific solution is introduced through a permanent lower abdomen tube and removed. This may either occur at regular intervals throughout the day, known as continuous ambulatory peritoneal dialysis (CAPD).

Keywords: Chronic kidney disease, end-stage kidney disease, continuous ambulatory peritoneal dialysis

Chronic kidney disease and urological malignancies

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Chronic Kidney Disease (CKD) and cancer are both major and growing public health problems nationally and internationally. The incidence of CKD continues to rise around the world and Urological malignancies (UM), including malignancies of prostate, kidney, urinary bladder and urinary tract, are highly prevalent in CKD patients. UM can be the cause or consequence of CKD.

The cause of CKD in patients with urological malignancies (renal, bladder, and prostate cancer) is often multifactorial, and relevant factors are the site of malignancy (kidneys), urinary tract obstruction and factors related to treatment (chemotherapy, surgery). Several studies have shown an association between CKD and incident UM. Pathogenetic factors have been postulated to include the chronic inflammation, oxidative stress and uremic toxins of CKD as possible triggers. Specific mechanisms on how urological malignancy causing CKD, as an example in renal cell carcinoma (RCC) can cause CKD because of the tumor itself, surgical reduction of renal mass (either partial or radical nephrectomy), and perioperative acute kidney injury. Other mechanism including medical therapies such as immune checkpoint inhibitors and vascular endothelial growth factor inhibitors can lead to acute kidney injury and resultant CKD. Determining and comprehensive study whether there is a robust association between the presence and severity of CKD and subsequent urological cancer risk and examining if level of kidney function is differentially associated with specific cancer types could have important public health implications for screening and early detection of cancer in patients with CKD.

Keywords: bladder cancer, chronic kidney disease, renal cell carcinoma, prostate cancer, urological malignancy.

When to start hemodialysis

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When you know your kidneys are failing, it's normal to want to put off Hemodialysis forever. Common wisdom used to say that starting Hemodialysis early was best for you. The funny thing about common wisdom, though, is it *could* turn out to be *wrong*. Research now suggests that putting off Hemodialysis *as long as you can* be the safer choice.

Keyword: Hemodialysis, management, end stage renal disease.

Early Detection Intrauterine Congenital Disorder

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Background: Congenital anomalies, also commonly referred to as birth defects, congenital disorders, congenital malformations, or congenital abnormalities, are conditions of prenatal origin that are present at birth, potentially impacting an infant's health, development and/or survival. The etiology of CA is genetic (30%–40%) and environmental (5% to 10%).

Methods: In this review for finding the related articles, the databases of NCBI, Elsevier, Pubmed and Google scholar were searched using the keywords such as Congenital anomalies, risk factors, early screening journals from 2018–2022.

Results: Congenital anomalies are recognized as any structural abnormality determined by factors operating largely before conception or during gestation and can be identified prenatally, at birth or later in life. They are usually subdivided into two groups: minor and major anomalies. First-trimester ultrasound has mainly been used to confirm fetal viability, establish pregnancy location, count the number of fetuses and assess gestational age by measurement of fetal crown rump length (CRL). It is advisable to perform the scan at 11 + 0 to 13 + 6 weeks' gestation as this allows confirmation of viability. Ultrasound-based screening for fetal structural anomalies is an integral part of routine maternity care, providing prenatal opportunities for additional genetic testing, specialist imaging, prognostic information and discussion of management options. MRI is now well established for the assessment of CNS anomalies and is being investigated for a range of other indications.

Conclusion: Congenital abnormalities is conditions of prenatal origin that are present at birth, potentially impacting an infant's health, development and/or survival.

Keywords: congenital anomalies, genetic, environmental, diagnostic.

Congenital Pediatric in Colorectal Disease

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Several colorectal disease cases necessitate comprehensive management. This article will discuss the primary diagnosis, management, radiology, and histopathology of Hirschsprung disease, including the problematic postoperative of Hirschsprung disease and anorectal malformation, operative techniques including pitfalls and challenges, and some colorectal cases encountered at Dr Zainoel Abidin Hospital Banda Aceh. Hirschsprung disease affects approximately 1 in 5000 live-born infants, with Acehnese Hirschsprung disease affecting 1 in 1800 live-born infants. Hirschsprung disease is a developmental disorder of the enteric nervous system characterised by the absence of ganglion cells in the myenteric and submucosal plexuses of the distal intestine. The cells are in charge of normal peristalsis. Unfortunately, Hirschsprung disease patients have aganglionosis of the intestine. The definitive diagnosis of Hirschsprung disease is based on histopathologic evaluation of rectal biopsy, which is still the gold standard diagnostic technique. Intestinal atresia, meconium ileus, meconium plug syndrome, and a variety of other less common conditions

are among the differential diagnoses. Hirschsprung disease surgery aims to remove the aganglionic bowel and reconstruct the intestinal tract by bringing the normally innervated bowel down to the anus while maintaining normal sphincter function. The most commonly performed operation is the Transanal Endorectal Pull-Through like soave or like Swenson, Duhamel procedure, and Soave Procedure.

No specific cause of anorectal malformation has been described. However, the condition is more common in certain geographic areas. Some families have a genetic predisposition, with anorectal malformation diagnosed in succeeding generations. In addition, imperforate anus occurs in association with several syndromes. The most common defect in females is rectovestibular fistula, whereas the most common one in males is recto urethral fistula.

In addition, benchmarking outcomes based on a set of parameters (type of Anorectal malformation, sacral ratio and spinal anomalies) is potentially an important tool to ensure minimum quality standards and improve overall care quality. General principles of postoperative a dilatation are begun 2 weeks after surgery. The optimal size of dilator, once the correct size is reached, the colostomy can be closed, which is usually 8–12 weeks after reconstruction. Dilatation must continue after closure. Constipation must be anticipated and proactively treated.

Keywords: colorectal disease, hirschsprung disease, anorectal malformation

Overview of Hypospadias Management

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Hypospadias is a congenital disorder characterized by the location of the external urethral orifice on the ventral penis, usually accompanied by chordee and excessive foreskin on the dorsal penis (dorsal hood). The average case of hypospadias around the world varies widely. In Europe around 19.9 per 10,000 births, and in Indonesia in the last 25 years, there has been a significant increase in the incidence of hypospadias cases. The risk factors associated with hypospadias are mostly genetic, placental and/or environmental. Found in 7% of all cases, have another family history of hypospadias. Hypospadias can be easily discovered at birth and the diagnosis can be made by describing the findings of the clinical status. Classification of hypospadias is using GMS classification system based on 3 components of assessment of the glans (G), meatus (M) and shaft (S) to assess the severity of hypospadias qualitatively. Although age at the time of surgery for the first time is not associated with the occurrence of complications, early management is still recommended to get better results. The basic principle of hypospadias surgery is to maintain a well-vascularized urethral plate and use it for urethroplasty. Several surgical techniques in the treatment of hypospadias have been developed and have their respective advantages, adjusting to the clinical needs of the patient. Therefore, it is very important to have clinical knowledge as well as available operative treatment modalities to treat this case.

Keyword : Hypospadias, management, outcome.

Early diagnose congenital heart disease

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Congenital heart disease (CHD) is an umbrella term that covers all heart defects present at birth, including dozens of defects that may occur singly or in combination. The abnormal structure of the cardiac chambers, valves, or great vessels in patients with congenital heart disease alters the normal pattern of blood flow. In some cases, doctors can find these problems in a baby before it's born. Sometimes, it's diagnosed in childhood or when an adult. CHD can vary from mild (such as a small hole in the heart) to severe (such as missing or poorly formed parts of the heart).

Eight-ten out of 1,000 infants are born with congenital heart disease. Of these, approximately 25 percent require immediate surgical or catheter-based intervention. Even with treatment, the lifespan of individuals with congenital heart disease is limited compared with their peers; 89.5 percent of individuals with congenital heart disease are alive at age 20, but for some diagnoses (e.g., truncus arteriosus and single ventricle), the survival is much poorer.

Some CHD may be diagnosed during pregnancy using a special type of ultrasound called a fetal echocardiogram, which creates ultrasound pictures of the developing baby's heart. However, some CHD are not detected until after birth or later in life, during childhood or adulthood. If a healthcare provider suspects a CHD may be present, the baby can get several tests to confirm the diagnosis. Other prenatal tests may be recommended if a mother has a congenital heart condition or if the baby has other risk factors for congenital heart disease, including inherited conditions such as Down syndrome.

The diagnosis of CHD is made by physical examination, blood laboratory, chest X-ray, pulse oximetry, electrocardiogram, echocardiography, magnetic resonance imaging, cardiac computed tomography, cardiac catheterization, and open-heart surgery.

As medical care and treatment have advanced, infants with CHD are living longer and healthier lives. Many children with CHD are now living into adulthood. Many people with a CHD lead independent lives with little or no difficulty. Others might develop disability over time. Some people with a CHD have genetic problems or other health conditions that increase their risk for disability.

Even with improved treatments, many people with a CHD are not cured, even if their heart defect has been repaired. People with a CHD can develop other health problems over time, depending on their specific heart defect, the number of heart defects they have, and the severity of their heart defect. For example, some other health problems that might develop include irregular heart beat (arrhythmias), increased risk of infection in the heart muscle (infective endocarditis), or weakness in the heart (cardiomyopathy). People with a CHD need routine checkups with a cardiologist to stay as healthy as possible. They also might need further operations after initial childhood surgeries. It is important for people with a CHD to visit their doctor on a regular basis and discuss their health, including their specific heart condition, with their doctor.

Keyword: Congenital heart disease (CHD), outcome, management.

Revascularization, endovascular or open surgery

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Critical limb-threatening ischemia (CLTI) is a severe form of peripheral arterial disease (PAD) characterized by clinical findings of lower extremity ischemic pain at rest, and/or ischemic tissue loss marked by ulcerations and gangrene, in the setting of specific, objective hemodynamic parameters. Revascularization to restore perfusion of the extremity with rest pain and/or tissue loss is the mainstay of therapy. Revascularisation is the mainstay of therapy for CLTI, but it is still uncertain which patients and which anatomy benefit from an 'endovascular first' approach or 'surgical bypass first' approach. Effective revascularization of the patient with PAD is about more than the procedure. The approach to the patient with symptom-limiting intermittent claudication or limb-threatening ischemia begins with understanding the population at risk and variation in clinical presentation. Open surgical techniques utilized in the treatment of CLTI consist primarily of endarterectomy and bypass. Endovascular techniques used in the treatment of CLTI include percutaneous angioplasty (using conventional plain, cutting, or drug-coated balloons), atherectomy (mechanical or laser), and stenting (bare metal or drug-eluting). Endovascular and open surgical revascularization are delivered to patients by a variety of vascular specialists. Perhaps not surprisingly, treatment biases among different provider specialties impact decision-making vis-à-vis which modality is offered to patients with CLTI. This is compounded by the fact that there is limited high quality data guiding vascular specialists on the optimal treatment approach. Thus the optimal choice of endovascular versus open surgical revascularization for patients with CLTI remains under investigation. The role of determinants such as clinical manifestation of disease, anatomic distribution of lesions, availability of bypass conduits, and patient comorbidities continues to be elucidated. The results of ongoing RCTs will provide vascular specialists much-needed guidance in this arena of vascular disease which has traditionally suffered from a lack of high level evidence.

Keywords: CLTI, revascularization, endovascular, open bypass surgery.

Diabetic foot surgery for tibio-peroneal disease

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Diabetic foot (WHO) is the foot of diabetic patients with ulceration, infection and/or destruction of the deep tissues associated with neurological abnormalities and various degrees of peripheral vascular disease in the lower limb. Diabetes mellitus (DM) is a major risk factor of peripheral artery disease (PAD), leading to increased morbidity and mortality as well as an accelerated disease course. In DM patients there is an increased occurrence of the main risk of the occurrence and development of diabetic foot ulcers, namely peripheral neuropathy, peripheral vascular disease and disruption of response to infection. In addition, in DM there is a wound healing disorder that increases the risk of infection. The macrovascular complications of diabetes result from hyperglycemia, excess free fatty acid, and insulin resistance. These cause increased oxidative stress, protein kinase activation, and receptor activation for advanced glycation end

products, factors that act on the endothelium. These pathways ultimately lead to atherosclerosis, the cause of the macrovascular complications of diabetes. Occlusive disease isolated to the tibial or peroneal arterial bed typically occurs in patients with diabetes. Ulceration and gangrene in this patient population are often multifactorial and difficult to treat. Limb threatening infections require urgent, Surgical debridement, Incision drainage, fasciotomy and amputation. The Treatment of Ischemia in the diabetic foot is aimed at restoring maximal perfusions to the foot, approaches include By pass grafting (autogenous-prosthetic graft) and endovascular (angioplasty-stenting).

Keywords: diabetic foot, tibia-peroneal, management.

Carotid doppler for early diagnostic in ischemic stroke

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Stroke is one of the main causes of increased morbidity and mortality. Atherosclerosis of the great vessels of the intracranial and extracranial carotid vessels is an important cause of ischemic stroke. Internal carotid artery stenosis is one of the causes that can result in ischemic stroke. Internal carotid artery stenosis can affect blood flow, which can cause ischemic stroke. In determining stroke, the use of appropriate neuroimaging can help save and plan the right treatment for the patient. Due to the limitations of neuroimaging techniques, early diagnosis of internal carotid artery stenosis remains a challenge. Carotid Doppler can be used to diagnose an internal carotid artery stenosis without the need for invasive procedures. To diagnose an arterial stenosis, it is necessary to identify the peak systolic velocity (PSV), end-diastolic velocity (EDV), resistive index (RI) and carotid intima-media thickness (CIMT). Examination using carotid Doppler also has an important role in the prevention of stroke, especially in patients with risk factors such as hypertension, smoking, and hyperlipidemia.

Keywords: carotid artery, carotid doppler, ischemic stroke.

Lower limb prostheses

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The prosthesis is an artificial substitute for a missing body part. A lower limb prosthesis refers to a prosthesis that replaces any part of the lower limb to restore the functional or cosmetic purpose of the lower limb. This may include artificial components that replace the hip, thigh, knee, ankle and foot. The main causes of limb amputation are; Blood vessel (vascular) disease, particularly from diabetes or peripheral arterial disease, cancer, injury (for example; motor vehicle crash, work-related accident, or military combat), and birth defect. For people who have had an amputation, a prosthesis (artificial limb) is often recommended to replace that body part. The prosthesis should be lightweight with reasonable durability, acceptable cosmetically, easy to maintain and clean, and easy to remove and remove correctly and rapidly. The prosthesis prescription must balance the amputee's need for stability, safety, function, durability, cosmetics, and sponsorship of available resources. The availability of

prosthesis services also must be considered because some components require more frequent maintenance than others. The higher energy requirements of ambulation using prostheses as measured by oxygen consumption underscores the importance of an efficient cardiopulmonary status. Even after prosthetic fitting and training, more energy is required for ambulation than normal gait. Success with a prosthesis is most likely to occur when the clinical team involves many different types of professionals, core team members include the surgeon, physical therapist, prosthetist, psychologist, family members, and depending on the patient needs. The two most common lower extremity amputations are the transfemoral (above the knee) and the transtibial (below the knee). The major components of a lower limb prosthesis have 4 main parts; socket, suspension, knee unit, and foot. The stages of using the prosthesis are follows; Preprosthetic training, Prosthetic fitting, and prosthetic training. Lower limb prostheses should enable the person to perform daily activities (such as; sitting, standing, walking, and running) independently and comfortably. At the best, a prosthesis may enable the person to function as well or nearly as well as before the amputation so that it can improve the quality of life.

Keywords: amputation, prostheses, ambulation.

Kidney transplant, Aceh experience

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The prevalence of chronic kidney disease has been increasing globally and is associated with impaired quality of life, morbidity, mortality, and a significant burden on the health care system. This is largely attributed to the rising prevalence of diabetes mellitus, hypertension, and obesity. Renal transplantation is considered the ideal treatment strategy for patients with end-stage kidney disease.

Patients with renal transplantation have a higher survival rate compared to patients with other solid organ transplantation, mainly due to advancements in the field of renal transplantation and the availability of effective immunosuppressive agents. Survival rate currently is reported to be 90%, 73.9%, 59.8%, 46.2%, and 36.7% in one, five, 10, 15, and 20 years, respectively. However, patients who undergo renal transplantation may develop serious complications such as side effects of immunosuppression, renal artery or vein stenosis/thrombosis, pseudoaneurysms, urinary obstruction or leak, peri-transplantation fluid collections, acute tubular necrosis, graft rejection, psychosis, and malignancy.

Kidney transplant recipients face a lifelong regimen of medications, health monitoring and medical appointments. This work involved in managing one's health and its impact on well-being are referred to as treatment burden. Excessive treatment burden can adversely impact adherence and quality of life. Aceh Province, now has facilities and has performed kidney transplantation since 2016. Up to now, 5 kidney transplant procedures have been carried out in Aceh province with the majority of patients being male (60% vs 40%). Additionally, the Majority of patients who undergone transplantation procedures over 40 years old. The outcome from our experience is that one patient died after a kidney transplant. Although related to kidney transplant services at our centre, we still receive assistance from other centres, we continue to grow and prepare ourselves in terms of infrastructure and human resources. In the future, we hope that Aceh will become one of Indonesia's centres of kidney transplantation.

Keywords: kidney transplant, chronic kidney disease, outcome.

Legal effectiveness of human heart organ transplantation in health system in Indonesia

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Organ transplantation is the last resort for handling damage to human organs. Organ transplantation has been performed in Indonesia except for heart organ transplantation that has never been done in Indonesia. He has never done a heart transplant in Indonesia, whereas in other Southeast Asian countries has been carried out for a long time. Why this transplant has never been done in Indonesia is mainly the main reason for this dissertation research.

Legal issues listed as follows: 1) How the regulation of organ transplant law regulated

in the legislation in Indonesia, 2) How factors that affect the effectiveness of the law on transplantation of human organs. 3) . How to set the ideal law on transplantation of heart organs in humans

Based on the problems studied, the type of research is normative legal research methods

and *social legal research*. Normative legal research methods are conducted by examining secondary data from existing Library materials. For *social legal research*, primary data is required conducted through interviews with prospective donors, their families, and prospective recipients and their families. Based on the research conducted, the results were obtained that the Legislation on Organ Transplantation in Indonesia has been regulated based on the Hierarchy of Legislation starting from the Source of Law of the Constitution 45 to the implementation of the Law in the form of Ministerial Regulation although not specific referring to Heart Transplantation, external factors of society and culture of the community greatly influence the legal attitude of the community to organ transplant procedures in Indonesia, the ideal legal arrangements regarding donor and transplantation of heart organs should be specifically regulated in the legislation specifically

Keywords: law of transplantation, heart transplantation, issue.

Lung transplantation in severe pulmonary diseases

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Lung transplantation techniques and survival have improved considerably for the last 3 decades. Improvements in donor management and selection have resulted in a significant expansion of this life-saving procedure, reaching more than 4000 lung transplants yearly worldwide.

Advances in patient selection, surgical technique, immunosuppression, and postoperative care have significantly reduced morbidity and mortality. However, despite the expansion, thousands of patients die of advanced lung disease each year. Fortunately, there are still some rooms to increase the number of suitable donor lungs available.

Lung procurement is a multiphased process that is often accompanied by complex logistics. Donor evaluation, management, and organ preservation are crucial steps for the procedure's success. The choice to perform a single versus a bilateral sequential lung transplant depends on the recipient characteristics and the value of increasing the number of recipients transplanted by performing two single-lung transplants from a single donor. Data from the International Society for Heart and Lung Transplantation reports that in 2017, there were 3,626 adults bilateral and 826 single lung transplants. The preference for bilateral versus single lung transplants is based on an observed increase in long-term survival. Different surgical approaches have been described for bilateral sequential lung transplantation with or without intra-operative mechanical circulatory support, such as sternotomy, clamshell (bilateral anterior thoracotomies with transverse sternotomy), and bilateral thoracotomy incisions.

In my presentation, I aim to describe the donation after brain death and circulatory arrest, the procurement technique, various surgical approaches for lung transplantation, and the results of lung transplantation in the Middle East.

Keywords: lung transplantation, severe pulmonary diseases.

Basic principles of hemorrhagic shock in trauma

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Hemorrhagic shock is one of the most common problems of trauma patients admitted to Surgical Emergency Unit. Early post-trauma mortality can be avoided by early diagnosis and prompt resuscitation, accompanied by management of the source of bleeding. Identification of traumatic coagulopathy, acidosis and hypothermia is crucial in resuscitation phase of hemorrhagic shock and current approach is to perform damage control resuscitation and damage control surgery. This management principles are based on understanding pathophysiology hemorrhagic shock and developing various surgical techniques learned from military trauma.

Shock exists when the delivery of oxygen and metabolic substrates to tissues and cells and removal of metabolites are insufficient to maintain normal aerobic metabolism. This imbalance between supply and demand occurs at cellular level in shock states. Tissue hypoperfusion activates a cascade of cardiovascular and neuroendocrine responses designed to compensate for inadequate oxygen delivery and metabolite removal. The pathophysiologic sequelae of shock may be due to the direct effects of inadequate tissue perfusion on cellular and tissue function and/or the host's overzealous responses to the shock state, resulting in multi-organ derangements.

The magnitude of both the shock insult and response varies depending on the degree and duration of shock. The consequences of shock may also vary from minimal physiologic disturbance with complete recovery to profound circulatory disturbance, end-organ dysfunction, and death. Accumulating evidence suggests that, although the quantitative nature of the host response to shock may differ between the various etiologies of shock, the qualitative nature of the host response to shock is similar regardless of the cause of the insult. This response consists of profound changes in cardiovascular, neuroendocrine, and immunologic functions. Furthermore, these responses vary with host genetics, time, and response to resuscitation. For example, in hemorrhagic shock, the initial compensation for blood loss occurs primarily through neuroendocrine responses to maintain tissue perfusion. This represents the compensated

phase of shock. With ongoing hypoperfusion, cellular injury worsens and the decompensated phase of shock ensues. Microcirculatory dysfunction, cellular injury and death, and inflammatory cells activation perpetuate the hypoperfusion and may exacerbate tissue injury. If resuscitation is achieved, ischemia/reperfusion injury may further exacerbate the initial insult. Persistent hypoperfusion results in further physiologic and hemodynamic derangements and cardiovascular collapse, which has been termed the irreversible phase of shock. At this phase, extensive parenchymal and microvascular injury has occurred such that further volume resuscitation fails to reverse the process, leading to death of the patient.

In summary, the basic principles of the management of hemorrhagic shock in trauma patients is based on the degree and duration of shock which determine the severity of cardiovascular, neuroendocrine, inflammatory body response, and sequelae of organ dysfunctions.

Keywords: hemorrhagic shock in trauma, outcome, management.

Penetrating thoracic injury when the optimal time to perform thoracotomy

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Penetrating injuries to the chest present a frequent and challenging problem, but the majority of these injuries can be managed non-operatively. This study aimed to describe the incidence of penetrating chest trauma and the ultimate techniques used for operative management, as well as the diagnosis, complications, morbidity and mortality

The mechanism of injury, gender, age, physiological and outcome parameters, including injury severity score (ISS), chest abbreviated injury scale (AIS) score, lung injury scale score, concomitant injuries, time from admission to operating room, transfusion requirement, indications for thoracotomy, intra-operative findings, operative procedures, length of hospital stay (LOS) and rate of mortality was recorded.

Penetrating injuries to the chest requiring a thoracotomy are uncommon, and lung-sparing techniques have become the most frequently used procedures for lung injuries. The presence of associated abdominal injuries increased the mortality five-fold. Factors that affected mortality were ISS, chest AIS score, SBP, ongoing chest output, blood transfusion volume, diaphragmatic injury and associated abdominal injury.

Keywords: penetrating thoracic injury, thoracotomy

Unstable hemodynamic of patients with pelvic fracture: what to do?

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Pelvic fractures can cause severe uncontrollable hemorrhage that leads to death due to shock and multiple organ failure. Hemodynamic instability in pelvic fractures is very challenging high-energy trauma that requires trauma surgeon's attention. A multidisciplinary approach needs to be done regarding required diagnostic and therapeutic decisions. We should also focus on effective physical examination, because excessive physical examination of the pelvis

can cause deterioration in patient's condition due to release of blood clot and delayed management. This review describes epidemiology, basic anatomy, classification, hemorrhage risk, how to diagnose, and treatment option of unstable hemodynamics in pelvic fractures. We consider that adequate resuscitation is not enough so it is very important to know what is the best treatment option for the patient. Hence, an evidence-based and protocol-driven approach is necessary to achieve optimal outcomes in these patients.

Keywords: pelvic fracture unstable hemodynamic.

Damage control resuscitation, a practical approach for severely hemorrhagic patients and it's effects on trauma surgery

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Massive bleeding following injury remains the main cause of death in trauma patients. Most preventable trauma deaths are due to uncontrolled hemorrhage and are responsible for 40% of trauma deaths. Coagulopathy observed in trauma patients was thought to be "a resuscitation-associated phenomenon or resuscitation-induced phenomenon". Replacement of the lost and consumed coagulation factors was the mainstay in the resuscitation of hemorrhagic shock. Developing effective strategies to control hemorrhage, successfully resuscitate the bleeding patient surgically, and adequately correct traumatic coagulopathy is essential to increase the chances of survival of trauma patients.

Damage Control Resuscitation (DCR) is a staged strategy addressing the physiological

derailment of major trauma patients by prioritizing the restoration of physiological function and the reversal of the lethal triad over the definitive treatment of the injury. DCR includes permissive hypotension, body rewarming, minimization of fluid resuscitation, and early balanced administration of blood and blood products.

The successful resuscitation of the massively bleeding and unstable trauma patient will depend on effective trauma team leadership, identification of early trauma-related coagulopathy, sound decision-making in the emergency and operating rooms and prompt implementation of a DCR and a damage control operative approach.

Keywords: damage control resuscitation, hemorrhagic shock

Damage control surgery in abdominal injury

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Major abdominal trauma patients may experience the "lethal triad of death," which includes impaired coagulation, metabolic acidosis, and hypothermia and dramatically increases the risk of death. Surgeons should rapidly control bleeding and stop further heat loss to avoid this deadly triad of death. Damage control surgery (DCS) is performed to stabilize potentially fatal conditions during the initial operation, prevent invasive treatments on unstable patients, and perform staged surgery following successful initial resuscitation. The initial intention of DCS was life preservation; however, recent publication also stresses

life and organ preservation. The invention of Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) as an alternative to Resuscitative Thoracotomy (RT) and the use of arterial embolization preserve life and preservation of organs more possible. This article discuss regarding the indication, using REBOA as part of DCS, and management of each abdominal organ during DCS.

Keywords: Major abdominal trauma, Damage Control Surgery, REBOA.

Basic concept of stem cells and iPSCs

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The understanding of the human brain represent a scientific conundrum and ultimately, the human brain in its studies of itself may be incapable of solving many of its mysteries. More than a century ago, Fridjof Nansen, a Norwegian neuroscientist, first described the cell as a basic and individual element of the nervous system in 1880's; as we reveal in more detail today. In fact its change our paradigm in how we think about nervous system, especially for me regarding the clinical problem in neurosurgical field. Neuroscience nowadays is transforming into a multidisciplinary that have implication far beyond basic science of medicine, affecting education, law, business, government, and many more parts of our social world.

Neuroscience and neurosurgery is an exciting, ever-changing, and challenging discipline of medicine. My research oriented are focuses on the Oncology and Stem Cells that I will elaborate later-on. Recently, we bridging up between neuroscience biology and technology, as two great power to change the world, from my point of view. Even in my research, there is more questions than answer; therefore, I always looking for the answer in both ways. I try to apply the results of my basic research into clinical application, and if there is obstacle or problem, we should return- back to the lab to search for the answer; from basic research to its clinical application, vice versa. Some of the major discoveries in fundamental application of Stem Cells and induced Pluripotent Stem Cells (iPSCs) in Neurosurgery, such as for traumatic brain-, spinal cord-injury, and stroke; I will tell more about it in my presentation.

Keywords: neuroscience research, stem cells and iPSCs application, neurosurgery.

Niche of stem cell: the approach of stem cell modulation

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Stem cells are a new hope in the disease treatment process. Currently, stem cells are used as treatment targets and as treatment it self. The ability of stem cell plasticity is very promising, especially for the treatment of degenerative diseases. On the other hand, the existence of stem cells as the forerunner of tumor and cancer cells causes experts to try to understand the nature and everything related to cancer stem cells to be able to find ways to inhibit the growth of these cells. An alternative approach to be able to regulate the modulation of stem cell development is to know the niche of stem cells. The niche of stem cells have

dynamics that open up opportunities for intervention. Niche stem cells refer to the microenvironment within the specific anatomical location where stem cells are found, microenvironment that interacts with stem cells and determines the fate of these cells. Niche stem cells refer to the microenvironment of stem cells both in vivo and in vitro. Important components of the stem cell niche include direct interactions between stem cells and surrounding cells, secreted factors, inflammation and scarring, extracellular matrix (ECM), physical parameters such as shear stress, tissue thickness and blood flow, and certain conditions such as hypoxia and certain metabolic states which causes stem cells to remain in a state of quiescence or become active cells to differentiate. The existence of various transcription factors with various underlying cell signaling is something that must be known. Several treatment approaches such as the administration of hormonal compounds, secreted factors, and natural ingredients are based on the ability of the active compounds contained in them to be able to activate or deactivate the niche to make differentiation process of stem cells. The modulation of the stem cell niche can also be done by modifying the lifestyle and regulating stress levels. However, it should be kept in mind that some interventions on cell signaling involving Wnt, hedgehog and Notch can cause teratogenic or carcinogenic effects, so a very detailed justification is needed to intervene in the stem cell microenvironment to be as expected.

Keywords: Niche, microenvironment, stem cell, transcription factor regenerative medicine.

Role of stem cells in orthopaedic problems

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Over the years, there has been a significant increase of number clinical trials involving mesenchymal stem cells (MSCs). Overall, in those studies, the biggest number come from neurological diseases, followed by joint diseases and cardiovascular problems. Most of the studies are in the 2nd phase studies. There are five main roles of Stem Cells and Tissue Engineering for Orthopaedic problems, the roles are for: repair, replace, restore, regenerate, and rejuvenate. By the means of those roles, mesenchymal stem cells are known to have abilities for replacing structures or replacing the metabolism of the target organ.

The safety of Allogenic MSCs has four parts: Allogenic MSC Excite relatively low immune reactions, undifferentiated and differentiated MSC do not elicit alloreactive lymphocyte proliferative responses and modulate immune responses, MSCs are hypoimmunogenic and suppress T-Cell alloproliferation in mixed lymphocyte reactions, and MSC avoid allogeneic rejection.

There are several studies of stem cell application undergo in RSCM. For the literature review, in vitro study and animal study is worked under Stem Cell & Tissue Engineering Cluster MERC FKUI. The Translational Study and Clinical trial has been worked under UPTTK Sel Punca RSCM. The usage of MSCs for implantation in atrophic nonunion of the long bones using a combination of 15 million autologous Bone Marrow Mesenchymal Stem Cells (BM-MSCs), 5gcm³ Hydroxyapatite (HA) granules, and internal fixation. Showing faster initial radiographic and functional improvements in the treatment group. The usage of MSCs in Critical Sized Bone Defects (CSBD) has been shown in the translational

study by using the combination of autologous BM-MSCs, HA granules, Bone Morphogenetic Protein-2 (BMP-2), and mechanical stabilization. In one oncologic pediatric case, an eight-year-old child suffering osteofibrous dysplasia had to undergo a wide excision leaving a CSBD. Implantation using a combination of autologous 50 million BM-MSCs, HA granules, BMP-2, and Djoko-Zarov hybrid circular external fixator was used to treat the CSBD. The treatment gave the patient progressive functional improvement and functionality of LEFS after 84 weeks, and there is no complication was shown.

The usage of MSCs implantation also gave satisfying results for spinal cord injury cases. Ten out of thirteen subjects felt erectile function improvement, even though the motoric and sensory improvement has not shown improvements. Intraforaminal Implantation of UC-MSCs applied on several levels of low back pain due to disc degeneration provide results that initially could only be mobilized using a wheelchair, now could be mobilized by walking.

In osteochondral lesion, the implantation of MSCs gives an improvement in MRI Cartigram T2 value after 6 months of observation. As well in knee osteoarthritis cases that have been treated with the combination of Umbilical Cord MSC (UC-MSCs) in secretome followed by Hyaluronic Acid, giving an improvement of Visual Analog Score (VAS), The International Knee Documentation Committee (IKDC) score, and The Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC). The usage of MSCs could also benefit the infection cases, as in one case showing infected non-union of the right femoral shaft was treated with a combination of UC-MSCs, BMP2, HA, and Masquelet Technique was performed. The results showed that 6 months postoperatively patient was able to mobilize with the help of axillary crutches.

Several cases and previous studies use MSCs as adjunctive therapy that has shown beneficial outcomes; hence it could be said usage of MSCs could be a breakthrough for some difficult orthopaedic problems. It is hoped that future studies on the use of MSCs in orthopaedic cases can be further explored.

Keyword: Stem Cells in Orthopaedic, MSCs.

Breakthrough pain metastatic cancer

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Pain is one of the most common and feared symptoms of cancer, with the prevalence largely differing based on the stage of the cancer. While the prevalence of pain in early-stage cancer is estimated at 33%, this percentage nearly doubles in patients with metastatic disease. Most patients with bone metastasis experience acute severe pain that is often localized to a particular area. As cancer pain progresses in severity it can aggravate the physical impairment and movement limitation produced by bone metastasis. Cancer pain is classified into two distinct categories: persistent background pain, and breakthrough cancer pain (BTcP). At present, BTcP is understood to be an episode of severe pain with variable duration that occurs in patients with chronic pain which often caused by bone metastasis. According to World Health Organization (WHO) mild pain should be treated with NSAIDs, whereas weak opioids are the treatment of choice for mild to moderate pain. Finally moderate to severe pain should be managed with strong opioids. There are numerous pharmaceutical and non-pharmaceutical options currently available for BTcP, a condition that presents a significant challenge to medical specialist.

Keywords: breakthrough cancer pain, bone metastasis, opioid

Prevent stunting by monitoring growth and development of babies and children

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Currently, Indonesia is still facing health challenges, including the high incidence of stunting in infants and children, which is 27.7%. Stunting is a condition of infants and children who have less height compared to their age, due to chronic malnutrition that occurs since the fetus is in the womb and in the early days after the baby is born and only appears after the child is two years old.

Children with stunting will be at risk of having a low level of intelligence and are more susceptible to disease. The impact will reduce productivity levels, threaten the quality of human resources and ultimately hamper economic growth and increase poverty. The Government's strategy in accelerating stunting prevention is to intervene in specific nutrition and sensitive nutrition in order to achieve the stunting rate target of 14% by 2024. One of the specific nutrition intervention efforts to prevent stunting is to monitor the growth and development of infants and children, especially in the first 1000 days of life. Monitoring the growth and development of infants and children is carried out regularly, continuously with a schedule, which aims to find any developmental disorders early, so that treatment can be carried out as early as possible.

Keywords: stunting, prevent, babies, children.

ECMO in Lung Transplantation

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In recent years, with significant improvement in technologies, our center (King Faisal specialist hospital) among several single and multi-center studies have shown promising outcomes related to the use of extracorporeal membrane oxygenation (ECMO) not only as a bridging strategy as well as a therapy for patients suffering from severe PGD post lung transplant (LTx), but also intraoperative in place of CPB. This report highlights the outcomes of cases managed using ECMO support.

Methods and Results: ECMO as a bridge to lung transplantation: Over the last several years, the use of ECMO as a bridge to LTx has gained significant attention in the management of patients with severe end-stage lung disease. Bridging previously healthy young patients to transplant when they suffer irreversible acute lung injury can also be performed in high volume centers. In 2015, we started our program to bridge our listed patients, who had completed their work up to LTx by placing them on ECMO if needed. 10 cases were bridged and transplanted, 9+ with VV ECMO and 1 with VA ECMO. 1 year survival of 90%. ECMO during lung transplantation : Cardiopulmonary bypass (CPB) has been historically considered the standard method of intraoperative support during LTx. Using ECMO for intraoperative circulatory support has the potential to decrease bleeding complications (due to lower heparin doses), PGD, and other complications associated with the activation of blood components and inflammation. We conducted a retrospective cohort study using a prospective database of patients who underwent LTx from January 2010 to December 2021 and required intraoperative cardiopulmonary support. Cases were labeled as ECMO or CPB. ECMO showed significant advantages over CPB for both intraoperative and early post-transplant outcomes. Patients undergoing LTx who

were supported intraoperatively with ECMO demonstrated a shorter duration of mechanical ventilation, (median 3 vs 7.5 days; $P = .005$), shorter ICU length of stay (5 vs 9.5 days; $P = .026$), and shorter hospital length of stay (19 vs 27 days; $P = .029$). Also ECMO group required less blood products during the perioperative period when compared with matched recipients who were supported with conventional CPB. There was less packed red blood cell (pRBC) transfusion (median 3 vs 6 units; $P < .001$), less platelet (0 vs 1 adult pooled units; $P = .007$), and less fresh-frozen plasma (1 vs 4 units; $P = .006$) requirements compared with the CPB group. The transfusion requirement for pRBC over the first 72 hours after transplant also favored the ECMO group (1 vs 2 units; $P = .014$). In our center, over the last 8 years, intraoperative ECMO was used in 201 cases out of total of 252 performed transplants (79.8%) with 30 days and 1 year survival of 90% and 86%. ECMO as a rescue strategy post LTx: Severe primary graft dysfunction (PGD) following lung transplantation remains the most common indication for ECMO after transplant. Our group and others have reported on utilizing ECMO to support the recipients who suffer from severe PGD. Survival in this group of patients was surprisingly good when supported with VV ECMO, especially considering the lethality of severe PGD. In our experience, 24% of LTx patients needed postoperative ECMO to manage severe PGD, 50 out of 53 (37 VV ECMO and 16 VA ECMO) cases who developed severe PGD from 215 lung Tx were weaned successfully, 47/50 alive after 1 year with 88% 1 year survival, our mean ECMO duration was 7 days

Conclusion: Patients listed for LTx may undergo ECMO therapy as a bridge to transplantation. In such cases the patient's overall clinical state and the problems of urgent organ allocation need to be considered. In our experience among others, ECMO has shown significant advantages over CPB for both intraoperative and early post-transplant outcomes. ECMO support used for early severe PGD is a useful resource with the potential to allow allograft recovery, and it is associated with acceptable survival and complication rates.

Keywords: ECMO Program, Lung Transplantation, Bridging Therapy

Digital subtraction angiography

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Digital Subtraction Angiography (DSA) is a procedure or action to examine the blood vessels of the brain and spinal cord. DSA is a diagnostic measure to detect changes in the lumen of blood vessels. This procedure is performed using a contrast agent and fluoroscopy aids to obtain a clear view of the blood vessels and is performed in a room or angiography suite such as a cathlab. In the brain, with this DSA action, the picture of the cerebral blood vessels in the anterior and posterior circulation arteries can be seen. In diseases such as stroke caused by atherosclerotic will be seen the location and magnitude of the blockage in the arteries; then the presence of malformations of blood vessels such as AVM (arterial-venous malformations), aneurysm images (abnormal enlargement of blood vessels).

Keyword: Digital Subtraction, Angiography

New alternatif therapie in endometriosis, the role of *chromolaena odorata* in endometriosis therapy

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Endometriosis is a chronic and estrogen-dependent disease, which is characterized by the presence of inappropriate endometrial glands and stroma. The disease in its development is progressive, angiogenic, invasive and metastatic and resistance to apoptosis. Inflammation and angiogenesis are the main biological mechanisms underlying the development of endometriosis. Therefore, a number of natural products with strong anti-angiogenic and anti-inflammatory effects have been extensively researched and form the molecular basis of their therapeutic effect on endometriosis. *Chromolaena odorata* has biological activity as anti-inflammatory, anti-oxidant and cytotoxicity. Also has an inhibitory effect on the viability and proliferative properties of cancer cells as well as cytotoxic effects and enhances apoptosis. Hormonal treatment used is generally expensive and often has a bad impact on infertility because it will disrupt the follicle growth cycle in the ovaries so that the treatment of endometriosis with infertility should not be hormonal. This study was conducted in an effort to find new therapeutic alternatives in endometriosis, tested on endometriosis model mice to minimize ethical, drug safety, ethical and legal issues.

Thirty mice (*Mus musculus*) Endometriosis mice were randomly divided into 5 groups consisting of endometriosis mice which were terminated on day 14 (pretest), endometriosis mice given Aquadest as placebo (P0), endometriosis mice treated with *Chromolaena odorata* leaf extract at a dose of 400 mg/KgBW. (P1), 800 mg/KgBW (P2) and 1200 mg/KgBW (P3) for 14 days. On the twenty-eighth day, the mice were dissected to assess the extent of endometriosis implants macroscopically in the hyperaemic area of the peritoneal wall. The measurement of the implant area is carried out in mm² which is calculated by the tracing method using the Image Raster application on the computer.

From this study, the average value of endometriosis implant area in the group given *Chromolaena odorata* leaf extract was 400 mg/KgBW (P1 = 15.60 mm²), 800 mg/KgBW (P2 = 14.23 mm²) and 1200 mg/KgBW (P3 = 14.23 mm²) and 1200 mg/KgBW (P3 = 0.00 mm²) was lower than the pretest group (P = 104.72 mm²) and the group that was given aquadest (P0 = 153.89 mm²), indicating that there was a significant difference ($p < 0.001$). There was a tendency for the area of endometriosis implants to be lower in the group receiving a higher dose of *Chromolaena odorata* leaf extract 1200 mg/KgBW (P3 = 0.00 mm²) compared to the group receiving a dose of 400 mg/KgBW (P1 = 15.60 mm²) and 800 mg/KgBW (P2 = 14.23 mm²).

It can be concluded that the administration of *Chromolaena odorata* leaf extract can produce differences in the area of endometriosis implants in endometriosis model mice. *Chromolaena odorata* leaf extract has potential and alternative as a new treatment for endometriosis.

Keywords: chromolaena odorata, endometriosis

Pain management in low back pain

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Low back pain is the most common symptom found in the primary health care and is the number one cause of disability throughout worldwide. It is estimated that around 60-80% of the world's population will experience back pain during their lifetime. Patients who suffer from low back pain and associated disability due to low back can experience a rapid worsening within a few weeks and even 10% to 20% develop chronic low back pain. Low back pain can be classified into acute, subacute or chronic low back pain and can be nociceptive or neuropathic in nature. Low back pain can come from three different sources of pain in the spine, namely axial-lumbosacral, radicular, and referral pain which all of these sources provide different clinical manifestations. The physician should be aware of the red flags symptoms that lead to more serious conditions of low back pain so that patients should be carefully and thoroughly examined every time this symptoms appear. Low back management consists of various modalities, both therapeutic and rehabilitative procedures. It is important for physician to properly identify and treat low back pain in order to treat the prevalence of low back pain and prevent those caused by this condition. Low back is more effective in a multi-disciplinary and multi-modal setting in the form of psychological therapy such as biofeedback and cognitive behavioral therapy, pharmacotherapy, physical therapy and rehabilitation, and interventional pain procedures.

Keywords: Low back pain, management

Curcumin: a potential oral herbal male contraceptive

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Population explosion and unwanted pregnancies continue to cause significant public health problems around the world. Indonesia is one of the five most populous countries in the world according to the World Population Data Sheet 2022. Family planning program is one of the vital elements due to reducing population growth. Demographic data and family planning report that the rate of contraceptive use is 93.66% for women and 6.34% for men. Women primarily use contraception. Male contraceptive participation remains low, with options limited to vasectomy and condoms. Limited male contraceptive options may explain the low participation rate. WHO recommends traditional medicine as a cost-effective substitute for manufactured medicines. *Curcuma longa* (*C. longa*) is used for medicinal purposes in some countries such as China, India and Indonesia. *Curcumin*, the active component of *C. longa*, is widely used as a coloring agent in foods, pharmaceuticals, and cosmetics. *C. longa* and *curcumin* are known to act as antioxidants, antiinflammatory, antimutagenic, and anticarcinogenic agents. The effects of *curcumin* on male fertility have not been extensively studied. Hembrom et al (2015) investigated the effects of an aqueous rhizome extract of *C. longa* on sperm count, sperm motility,

and semen pH in male Swiss albino mice, causing infertility. Mice were given an aqueous rhizome extract of *C. longa* orally (600 mg/kg body weight/day for 8 and 12 weeks) resulted in reversible spermatogenesis, decreased seminiferous tubules diameter, and loosening of germinal epithelium, thus indicating its potential in reducing male fertility. In another study by Ashok et al (2004), administration of aqueous rhizome extract of *C. longa* at a dose of 500 mg/kg body weight for 60 days decreased the weight of the epididymis, seminal vesicles, ventral prostate, and testis. This treatment reduced sperm count and motility, as well as the number of germ cells, thus reducing fertility. Leydig cells were also affected. These treatment effects are attributed to the antiandrogenic properties of the extracts. These authors also reported that sperm count and motility in the epididymis of a curcuma-treated rat, recovered two months after his cessation of treatment. Research of Parkes mice by Mishra (2004), *Curcumin* treatment (600 mg/kg body weight/day for 56 and 84 days) had no effect on body weight. Nevertheless, it caused a marked reduction in testis, epididymis, and seminal vesicle weights. This treatment also adversely affected sperm parameters in caudal epididymis, on levels of sialic acid and fructose in the epididymis and seminal vesicle, respectively, and serum level of testosterone. In addition, *Curcumin*-treated male fertility was also affected. Histologically, testes in *Curcuma*-treated mice exhibited degenerative changes in the seminiferous tubules, although normal tubules were also seen in sections. The diameter of the seminiferous tubules and height of the germinal epithelium in testes of *Curcuma*-treated mice were also decreased. However, after 56 days of withdrawal therapy, the changes seen in reproductive indices returned to control levels. In summary, *curcumin* in *C. longa* treatment causes noticeable changes in the male reproductive system that reverse when treatment is discontinued. Therefore, *C. longa* or *curcumin* may have the potential to regulate male fertility.

Keywords: Anti-fertility, Male Contraceptive, Curcumin, Curcuma Longa

Modern surgery education Indonesian perspective

Wirisma Arif Harahap

Chairman of College of Surgeons of Indonesia

Indonesia is a country in [Southeast Asia](#) and [Oceania](#) between the [Indian](#) and [Pacific](#) oceans. It consists of over [17,000 islands](#), including [Sumatra](#), [Java](#), [Sulawesi](#), and parts of [Borneo](#) and [New Guinea](#). It is the world's largest [archipelago state](#) with over 277 million people and the world's [fourth-most populous country](#). According to 2022 data, Indonesia has over 26,000 health care facilities; 3112 hospitals, and 173,779 medical doctors. The proportion for medical doctors with only 0.6 doctors per 1,000 population, specialists 9/100.000 and surgeons 0.8 per 100.000 population. Indonesia introduced its universal healthcare program, the Jaminan Kesehatan Nasional (JKN) in 2016, which is provided by Health Social Security Agency and currently covers over 200 million people (86.07% population).

Surgical services in Indonesia began with the arrival of the first surgeon from the Netherlands in 1889, namely dr. CH Stratz and followed by other surgeons from the Netherland. The first medical school was founded in Indonesia in 19013 in Jakarta namely Stovia (School tot Opleiding van Inlandsche Artsen). Surgery specialist training started in 1942, located in Batavia and Surabaya (by Dutch surgeons) which then continued in the era of independence. Around 1955 there were 10 surgeons in (Medan, Jakarta, Bandung, Semarang, Yogyakarta

& Surabaya) who received training in the Netherlands and then started surgical training after independence. At that time, 3 education centers were opened, namely Jakarta, Bandung, and Surabaya with education carried out conducted by individual surgeons with local curricula. The method used is a traditional apprenticeship with a 3-5 years training period.

Since 1950, there has been a majorization in the formation of subspecialties in the surgical sciences of Urology, Orthopedic, Neurosurgery, Plastic Surgery, Oncology, Thorax, Vascular, Digestive, and Pediatric. IKABI (Indonesian Surgeon Society) was formed in 1967 and then formed the Indonesian National Board of Examination later known as the College of Surgeons of Indonesia (CSI). For the first time, a general surgery training system was introduced to determine candidate selection, curriculum, and exit examination by the training center itself. A surgeon competence certificate was given by the Indonesian Surgeon Society. The surgery training center at this time exists in 6 Universities in Jakarta, Bandung, Semarang, Jogjakarta, Surabaya, and Medan. National standards of surgical training, curricula, standard competence, and national examinations were established in 1997 by the College of Surgeons of Indonesia. Starting at this time the courses of ATLS, BSSC, and fundamental laparoscopic surgery become obligations that must be carried out during education.

Advancement of surgical service in the 21st century, based on four surgical science today is the advancement of Basic Science, Minimally Invasive & Endovascular, Conserving & Transplant organs, and Cancer Surgery. The core competency mandates have set into motion changes in education that result in measurable outcome-based training. CSI determine that in carrying out of surgical training, every center should prioritize education over service, based on the planned curriculum, and the use of simulation. Landmark this program are National Courses and the National Exit Exam conducted by a National Board of Examiners. In 2006 the national surgical curriculum already uses a competence-based system with a modular approach. There are 144 modules that must be run for 5 years of Surgical education based on competency-based training. Learning activities through Tutorial & Case based discussion, Bedside Teaching, Journal Club, Courses & Workshops, Skills Lab with simulator facilities, clinical rotations, and surgery supervised by seniors as both assistants and operators. In the 2016 curriculum, it has been determined that the length of education is 4 years and there is a simplification of modules from 166 modules to 64 modules. Surgical education in Indonesia is carried out at the teaching hospital and network hospitals located in remote areas to set the experience of residents to be able to work in different situations.

Quality assurance of the education system, curriculum, and graduates is carried out by internal quality assurance by faculty and university every year and external quality assurance done by Indonesian Health Education Quality Assurance every 5 years. The result of accreditation are A (Excellent), B (Good) and C (Poor). Accreditation C may cause the course of study to be closed.

Keywords: surgery education, medical education.

YOUNG INVESTIGATION AWARD

The relationship of blood erythrocyte index value to hypothyroid treatment compatibility in endocrine outpatient clinic Zainoel Abidin Hospital, Banda Aceh, Indonesia

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Introduction: Thyroid hormones play an important role in a variety of mechanisms including protein synthesis, bone maturation, and hematopoiesis in the bone marrow. Hypothyroidism causes a decrease in plasma erythropoietin levels. Disturbances in thyroid hormone synthesis can cause abnormalities in red blood cells because thyroid hormone increases erythropoiesis by causing the proliferation of erythroid progenitor cells.

Methods: The population in this study were patients who had been diagnosed with hypothyroidism who were treated at the endocrine polyclinic of Zainoel Abidin Hospital Banda Aceh starting from January 1, 2010 to October 5, 2021. The sample is all Hypothyroid patients who seek treatment at the endocrine polyclinic of Zainoel Abidin Hospital Banda Aceh which was obtained from the medical record data of Zainoel Abidin Hospital, Banda Aceh.

Results: Based on the data obtained from the medical records of Zainoel Abidin Hospital, it was found that as many as 188 hypothyroid patients were treated at the Endocrine polyclinic, Zainoel Abidin Hospital, Banda Aceh, consisted of 162 women (86%) while men 26 patients (14%), Out of 188 patients, 36% (69 patients) adhered to treatment and another 63% (119 patients) did not comply. treatment in the last 6 months. However, of the 188 hypothyroid patients, only 90 patients who met the inclusion and exclusion criteria were sampled in this study. 43 patients (48%) did not comply with treatment where the patient did not come to the Endocrine polyclinic of Zainoel Abidin Hospital for control.

Conclusion: In this study, it was found that the female sex was more dominant than the male. Levothyroxine treatment at a dose of 100 mg was found to be more widely used. There was no significant difference between erythrocyte index value on medication adherence, but there was a significant difference between medication adherence in hypothyroid patients after undergoing thyroidectomy than in hypothyroid patients without surgery.

Keywords: hypothyroidism, erythropoietin, erythrocyte index.

Technique results and follow-up of kidney samples from living donors in renal transplantation: about a series of 270 donors

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Introduction: Living donor nephrectomy exposes the surgeon to a particular challenge since it involves performing a major operation on an individual who is

not ill. This living donor surgery has undergone many developments. The open technique, considered the technique of choice for many years, can be performed by lumbotomy or subcostally. These two approaches are very safe in terms of mortality and morbidity. This open-air technique was used by our team to take kidney samples from all living donors. The objective is to provide an update on the technical aspects of living kidney donor surgery as well as the monitoring and development of our 256 donors.

Methods: From January 2010 to April 2022, 270 kidney samples were taken by our team (243 left, 27 right) by conventional means. The approach was the classic Lumbotomy in extra-peritoneal 98% and 2% s / costal right, 47% were men and 53% women. The average age is 46 years old (20 – 72). The donation was intra-sibling in the majority of cases: 23.5% brother, 23% sisters, 35% mother, 13.5% father, son 2.3%, daughter 1.2%, uncle 0.4%, spouse 1.5%. Preoperative CT angiography showed 1 superior polar artery in 14 cases, 3 renal veins in 9 cases and ureteral duplicity in 1 case. After complete dissection of the kidney and ureter, the adrenal and genital veins are tied, the renal artery and vein sectioned on vascular clamps and sutured (non-absorbable thread). The kidney is extracted then perfused with a cold solution before conditioning and then grafted simultaneously. The main objective to minimize the risks for the donors and to obtain the best possible quality graft and to ensure the harmlessness of this act, a follow-up result of 10 years is reported.

Results: The 270 kidney samples were performed by the exclusive classical route without complication. Blood loss was less than 120 ml. Operative time was on average 122 min (90-155). Warm ischemia during sampling was on average 63 sec (52-74). Cold ischemia was on average 22 min. The mean length of hospitalization was 5.7 days (4-7). Physical activity was resumed after 8 days and professional after 5 weeks. The perioperative complications are: 03 surgical revisions for haemorrhage, 03 wound sepsis and 01 parietal hematoma. Postoperative complications are: residual pain 6.25% keloid scar 2.7% hypertension 1.5%, minimal IR 0.7% eventration 2.7%, with 0% mortality.

Conclusion: We can conclude that the transplant from the living related donor finds all its legitimacy taking into account the very low risks for the donor both from the point of zero mortality in our series and from the low morbidity. Our study has also demonstrated after sufficient hindsight, lumbotomy remains for us the safest and above all the fastest way to extract a quality kidney from the donor, and which has always been entrusted to very experienced surgeons. but we must not oppose a systematic refusal to minimally invasive methods (coelio-surgery and use of the robot) which have the merit of limiting the risk of eventration and painful sequelae.

Keywords: renal transplantation, outcome, management

Declining in estimated Glomerular Filtration Rate of Chronic Kidney Disease Patients After Ramadan Fasting is Independent of Interleukin-6 serum level

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Introduction: Ramadan fasting is a compulsory for adult Muslims who have no medical problems. Role of Ramadan fasting in increasing or decreasing estimated Glomerular Filtration Rate (eGFR) of chronic kidney disease (CKD) patients is still debatable. Previous studies showed decrease Interleukin-6 (IL-6) after Ramadan fasting while IL-6 is associated with progression of eGFR in CKD patients. This study aimed to determined role of Ramadan fasting on eGFR and IL-6 of CKD patients and the correlation between eGFR and IL-6.

Methods: As many as 37 CKD stage 3 and 4 patients who fasted for minimum of 14 hours per day at 21 days in Ramadan month were included in the study. Parameters of hematology, kidney, liver and metabolic as well as eGFR and IL-6 serum before and after Ramadan fasting were compared to examine effect of Ramadan fasting on CKD progression and the correlation with IL-6 serum level.

Results: This study showed significant decreased of eGFR in CKD stage 3-4 patients after Ramadan fasting ($p < 0.001$) that was parallel with significantly increased of serum creatinine level ($p < 0.001$). Additionally, the study also showed decrease IL-6 serum level after Ramadan fasting. However, declining eGFR is not correlated with decreased IL-6 serum level which reveal that decreased eGFR in CKD stage 3 and 4 patients after Ramadan fasting is not correlated to IL-6 serum.

Conclusion: This study showed for the first time that declining in eGFR of CKD patients after Ramadan fasting is IL-6 serum independent.

Keywords: estimated glomerular filtration rate, chronic kidney disease, ramadan fasting, interleukin-6 serum

Assessing the effect of electroacupoint stimulation in craniotomy patients

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Introduction: Craniotomy is a commonly performed neurosurgical procedure used to treat a variety of conditions, from trauma to cancer. Many conditions can occur after a craniotomy, and dealing with those complications can be difficult. Transcutaneous electrical acupoint stimulation (TEAS) is an effective adjunctive therapy following craniotomy surgery. Thus, this study aims to evaluate the effect of electroacupoint stimulation in craniotomy patients.

Methods: Multiple scientific databases were consulted, including Pubmed, Cochrane, and ScienceDirect. The search consisted of keywords and MeSH terms relating to the tests under investigation combined with MeSH terms of "electroacupuncture" and "craniotomy". Studies reporting electroacupuncture in post-craniotomy patients serve as the primary inclusion criteria.

Results: This study included 10 studies with a total of 656 participants, including 9 randomized controlled trials and 1 clinical trial. Four randomized controlled trials (RCTs) showed no significant differences in heart rate and blood pressure between electroacupuncture (EA) patients and controls. Three

RCTs demonstrated decreased postoperative nausea and vomiting (PONV) in EA patients. Two RCTs demonstrated that EA could prevent immunoglobulin levels from decreasing after surgery. Two RCTs demonstrated that EA could alleviate post-operative pain and shorten post-operative spontaneous respiration time. A clinical study demonstrated that acupuncture can reduce pro-inflammatory cytokine levels, including EA. Despite all of this, we do not conduct any statistical analysis of the results.

Conclusion: This review discusses the beneficial effects of electroacupuncture on post-craniotomy patients. However, additional research, specifically meta-analyses, are required to confirm the efficacy and safety of electroacupuncture in patients who have undergone craniotomy.

Keywords: craniotomy, electroacupuncture, review, transcutaneous electrical acupoint stimulation.

High neutrophil-lymphocyte ratio as a predictor of mortality in major burn patients

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Background: Major burns are a type of trauma with a high risk of mortality. The major burn sufferers experience a variety of local and systemic inflammatory processes. Early management of burn patients can play an important role in determining survival. Therefore, an accurate predictor of mortality indicators is needed in burn patients. One such indicator is the neutrophil-lymphocyte ratio which was studied further in this study.

Methods: This study used an analytical observational study design with a retrospective case-control study approach. The case group was patients with major burns who experienced mortality more than 7 days while those who did not experience mortality were included as the control group. The neutrophil-lymphocyte ratio was assessed on days 1, 2, and 3 after the burn event. Neutrophil-lymphocyte ratio of ≥ 10 was classified as high. The main analysis was carried out by binomial logistic regression test by controlling for the effects of confounding variables.

Result: Subjects included 60 burn patients with 30 survivors and 30 mortalities. The sex characteristics of the subjects were predominantly male (70%) with a median age of 38.5 (IQR 30.5 – 52.5) years. Fire (68.3%) was the most common cause of burns. The median neutrophil-lymphocyte ratio was found to decrease from day 1 (median 15.6, IQR 10.1 – 21.7) to day 3 (median 6.7, IQR 4.4 – 11.8). However, there was a different pattern in which the value of the neutrophil-lymphocyte ratio was found to increase on day 3 in the mortality group. The binomial logistic regression test found that the neutrophil-lymphocyte ratio value on the 3rd 10th day was significantly associated with mortality risk with an aOR of 13.91 (95% CI 1.77 – 109.47).

Conclusion: A high neutrophil-lymphocyte ratio at day 3 can be used as a predictor of mortality in major burn patients

Keywords: major burns, neutrophil-lymphocyte ratio, mortality, predictor.

The effect of kenanga (*cananga odorata*) flower extract ointment on wistar rats induced grade IIA burn

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Introduction: Burns are one of the traumas that often occur in everyday life and second-degree burns are the most common. One of the herbal plants used by the community to heal burns is kenanga flower (*Cananga odorata*). This study aims to determine the content of kenanga flower extract ointment and its effect on healing burns.

Methods: Rats were divided into four groups, namely normal rats and rats with induced burns. Ylang flower extraction using maceration method with 70% ethanol solvent, then made an ointment with 10% extract concentration. The hair on the backs of the rats was shaved and cleaned with 70% ethanol, then the skin was wound by attaching a round iron metal heated to 100°C, for 5 seconds, resulting in burns with a diameter of 1 cm. The test materials were kenanga flower extract ointment and bioplacenton which were applied for seven days. During the study, the diameter of the burn was measured using a caliper. After the seventh day, the mice were sacrificed and the skin tissue of the mice was excised for histopathological examination.

Results: The results of this study indicate that the kenanga flower contains alkaloids, saponins, flavonoids, triterpenoids, and tannins. Analysis of the diameter of the burn on the seventh day showed that the diameter of the burn that was given kenanga flower extract ointment was smaller than that of the untreated rats.

Conclusion: The histopathological appearance of the skin of rats treated with ylang flower extract ointment was different in terms of the number of fibroblasts, collagen, angiogenesis and epithelialization compared to untreated rats. This indicates that the kenanga flower extract ointment is effective in healing second-degree burns.

Keywords: burns, cananga flowers, cananga odorata, white rats.

The use of modified nasogastric tube as a single lumen central venous catheter in emergency setting due to unavailability of central venous catheter during COVID-19 pandemic era in eastern Indonesian region (Ambon, Maluku): a case report

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Background: Werner Forssmann pioneered the insertion of a central venous catheter in a human. Forssmann described canalizing his right atrium via

the cephalic vein in 1929. Central venous catheters play important roles in emergency settings for providing interventions and monitoring patients with limited vascular access. During the COVID-19 pandemic, when medical devices were limited, we experienced a shortage of central venous catheter. In emergency settings, we are using a nasogastric tube as a single lumen central venous catheter

Case Description: A 62-year-old male patient was hospitalized with septic shock from community-acquired pneumonia aggravated by hypoalbuminemia with unstable hemodynamics requiring central venous access. We modified a nasogastric tube (NGT) no. 5 as a single lumen central venous catheter by cutting at both tips, reused sterilized guidewire, abbocath 16 as a dilator and abbocath 18 G as a puncture needle. After the procedure was performed, there was no sign of complications.

Conclusion: Modified NGT as a single lumen central venous catheter can be used in emergency settings due to the unavailability of conventional CVC.

Keywords: central venous catheter, nasogastric tube, vascular access.

The effect of lateral wedge insoles on pain improvement with knee osteoarthritis grade 2 medial

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Introduction: Knee Osteoarthritis (KOA) is the most common joint disease that contributes significantly to the disability of function. Biomechanical stress due to increased walking joint load is part of the course of KOA, so the condition becomes a potential target for strategic therapy in reducing and slowing the progression of the disease. Tools including lateral wedge insoles (LWI) have an important role in the medial compartment of KOA because they are able to reduce the pressure vector on the ground surface relative to the center of the knee joint during walking, thereby reducing the moment of adduction in KOA patients. This study aimed to assess the benefits of reduced response after 2 weeks of using LWI with varying degrees of inclination.

Methods: This prospective study with an experimental design conducted at the Orthopedic Polyclinic of Dr. Zainoel Abidin General Hospital, Banda Aceh, Indonesia, in July-August 2022. KOA patients who met the inclusion and exclusion criteria were assessed for disease severity, including knee pain quality, using the Western Ontario and McMaster University Arthritis Index (WOMAC). The intervention was then carried out in the form of giving LWI with three tilt angles, namely 7, 8 and 9 degrees. After 2 weeks of using the LWI, the WOMAC scores were re-measured and compared between the three LWI angles. Data tested with Graphpad Prism 9 software with $p < 0.05$ considered statistically significant.

Results: Of the total 36 patients (12 patients per treatment group), 31 patients (86.1%) were female with an average age between 55.2-62.8 years. Body Mass Index shows that most KOA patients are overweight with a small proportion of patients suffering from Diabetes Mellitus, Hypertension and Coronary Heart Disease. This study showed WOMAC scores were more significant

after presenting LWI at all inclination angles, but the 8-degree tilt angle gave a better improvement than the 7 and 9-degree angles. Furthermore, there was a significant improvement in pain scores at all degrees of LWI slope ($p < 0.0001$) whereas an 8-degree LWI gave a significant improvement in pain scores ($p < 0.0001$).

Conclusion: The use of lateral wedge soles for 2 weeks with a tilt angle of 8 degrees significantly reduced the difference in inclination angles of 7 and 9 degrees in patients with OA Genu.

Keywords: osteoarthritis, WOMAC, LWI, 8 degrees.

Middle meningeal artery embolization and pediatric chronic subdural hematoma: a systematic review of the literatures.

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Introduction: Chronic Subdural Hematoma (CSDH) is a disease commonly found in the elder population. It is not a typical finding in pediatric population. History of shunt surgery, child abuse, and blood disorder are some of common causes of pediatric CSDH. There is growing evidence about the role of middle meningeal artery (MMA) embolization CSDH management in elderly population with high risk of rebleeding. However, the evidence in pediatric population is still sparse.

Method: A systematic literature searching was conducted on PubMed, Scopus, and Web of Science database from 2000 to July 2022. Search strings was generated based on combination of modified search terms, such as *CSDH*, *MMA embolization*, and *child*. Risk of bias was assessed using the Cochrane Risk of Bias in Nonrandomized Study for Intervention. Data was analyzed from August to September 2022.

Result: A total of 7 articles was included in this review. The success rate of MMA embolization in pediatric CSDH was 85.7%. History of ventriculoperitoneal shunt, blood coagulation disorder, and trauma were the causes of CSDH. Time to achieve success was varied from 2-9 months. No study with low risk of bias was found.

Conclusion: This systematic review found no high-quality evidence regarding the role of MMA embolization in CSDH management in pediatric population. However, due to its high success rate, MMA embolization could be a promising approach in treating CSDH in pediatric.

Keywords: Chronic subdural hematoma, middle meningeal artery embolization, pediatric.

Management of perioperative hypothermia in pediatrics: a systematic review

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Background: Hypothermia (core body temperature < 36 °C) is a common side effect in patients undergoing surgery. Several intrinsic and extrinsic factors in the patient, e.g. drugs, comorbidities, trauma, ambient temperature, type of anesthesia, as well as the extent and duration of surgery, affect core temperature. Perioperative hypothermia negatively affects pediatric and adult patients. Children, especially neonates, are at higher risk of perioperative hypothermia than adults. Objective: To determine the current management of perioperative hypothermia in pediatrics.

Methods: This study used a systematic review using Perioperative Hypothermia and Management on Pediatric in Google Scholar, Crossref, and PubMed. The most recent studies in English were published in 2019-2022.

Results: After final screening, the authors analyzed 4 articles published after 2019.

Conclusion: Active temperature management is required in the pre, intra, and postoperative periods to reduce the risk of perioperative hypothermia especially in pediatric patients. Temperature measurement must be carried out with accurate and periodic checks. Perioperative temperature management in pediatrics includes the use of heating devices tailored to individual needs and environmental conditions. Heating blankets and mattresses and administering properly warmed infusions through special devices are important in the management of hypothermia. Temperature management should be recorded and adapted to the patient's needs.

Keywords: perioperative hypothermia, body temperature control, perioperative care, anesthesia, pediatrics, surgery, hypothermia

ORAL PRESENTATION

Video-assisted thoracoscopic surgery (VATS) in descending necrotizing mediastinitis: a case report

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Background: Descending necrotizing mediastinitis (DNM) is a rare yet potentially fatal infection. Early diagnosis is essential because it can rapidly progress to septic shock and organ failure. Its rapid downward progression leaves little space for prompt diagnosis, and the drainage methods are still under debate. VATS is safe, effective, and a less invasive surgical option for managing DNM and should be considered a good alternative therapeutic modality.

Case Presentation: A 19-year-old girl experienced shortness of breath two days after submandibular abscess drainage surgery. Chest computed tomography (CT) revealed mediastinitis and bilateral pleural fluid collection. The patient underwent uniportal video-assisted thoracoscopic surgery (VATS). Decortication was done on both lungs. A pericardial window was also created. An infusion line was inserted on each side of the chest at the second intercostal space. A 28 Fr chest drain was also inserted on each side in the usual fashion. The mediastinal space was drained through a 28 Fr tube from a subxiphoid incision. Administration of levofloxacin and metronidazole was continued through the twelfth day since her admission.

Discussion: DNM requires timely diagnosis and correct treatment. Contrast-enhanced cervicothoracic CT scan is currently considered the gold standard to diagnose DNM. The available literature is still yet to conclude the best surgical approach for the treatment, whether through a selective or mandatory transthoracic incision. The main goal of surgery is to maximize drainage and excision of necrotic tissue. VATS can be applied as a useful, safe, and effective treatment modality for the management of DNM.

Keywords: descending necrotizing mediastinitis, submandibular abscess, video-assisted thoracoscopic surgery, mediastinitis

Successful endovascular revascularization with stenting in complex CLTI case: a case report

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Introduction: Chronic limb-threatening ischemia (CLTI) is a remarkably morbid condition that causes significant mortality, limb loss, and pain, as well as

reduces health-related quality of life in those who are affected. The cornerstone of CLTI therapy is revascularization, which can lower the amputation rate.

Case description: A diabetic type II 68-year-old female patient presented with complaints of pain, swelling, and itching in the left leg that was felt approximately 1 month ago. The wound persists, although the ankle was already amputated. CT-angiography showed total occlusion in 1/3 distal left femoral artery and no visualization of the left popliteal artery. She was diagnosed as CLTI femoropopliteal sinistra Rutherford VI TASC II type D with ischemic rest pain. The patient planned for an endovascular revascularization procedure. Victory 14 wire 0,014" was inserted, but recanalization did not penetrate, continued with 18 wire, the lesion could penetrate. DSA evaluation found significant residual stenosis, thus continued using abbot supra peripheral stent system. The patient was successfully treated and showed that the left femoral artery was well visualized with TIMI flow 3. The left popliteal artery was still seen at 50% with no significant residual stenosis with TIMI flow 2. After 3 months, she did not complain of any ischemic pain in the left leg.

Discussion: The Supera peripheral stent system was developed to withstand the femoropopliteal artery's unique stressors. There have been few studies on super stenting in complex CLTI, and the primary patency at 1 year was 77% in lesions measuring 92-236 mm. This case report successfully applied the procedure in complex CLTI (mean length >200mm) with no restenosis and repeated target limb revascularization after one year.

Conclusion: We successfully performed revascularization using supra stenting, and the femoropopliteal artery showed good TIMI flow results. In CLTI patients, stenting may be an option to lower the risk of major lower limb amputation.

Keywords: CLTI, rutherford VI, stenting, revascularization

Mastopexy with lejour technique after thoracal wall tumor management

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Introduction: Primary Thoracic wall tumor is rare, with most cases found malignant. Complete tumor resection is the main treatment recommended. Plastic surgery plays an important role in defect reconstruction after the main surgery. With the lejour technique, mastopexy is the procedure of choice in managing this condition.

Case report: A 30 years old female presented with approximately 12 x 10 x 10 cm, solid, fixated with well-defined margin lump on her left chest since 3 years ago, without any other symptoms. From Thorax CT Scan examination, it was found expantile heterogeneous cystic mass with a cortical breach and multiple septations, which extends and compresses the superior lobe of the left lung and deviates the mediastinum to the right, the left subclavian artery to the cranial and compresses the left pulmonary artery, suggesting a primary benign bone tumor. The procedure was started with the Lejour technique until the tumor margin was evaluated.

Discussion: Lejour technique was the minimal scar technique for breast reduction. It is started with preoperative marking in a fully erect sitting position. An opened-out keyhole for the areola margin was then added. After deepithelialising, the superior pedicle incisions created the so-called "breast

pillars". All remaining breast tissue was dissected out for a subcutaneous mastectomy and excised. The medial and lateral breast pillars were then sutured together. The complication of this technique such as delayed wound healing, fat necrosis and wound infection.

Conclusion: Complete tumor resection is recommended as the main management. To diminish the scar from surgery, the plastic surgeon plays an important role in applying the Lejour technique as the thoracic surgeon's starter point to eradicate the mass.

Keywords: Thoracal wall mass, lejour technique, mastopexy

An overview of the quality of life of patients with lower extremity fractures post ORIF at Zainoel Abidin Hospital, Banda Aceh

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Background: Fracture is a break in the continuity of the bone caused by trauma / force. ORIF is a treatment for bone repositioning and fixation so that it helps bone healing. Post-ORIF patients can affect their quality of life in various aspects.

Objectives: This study aims to determine the description of the quality of life in patients after Open Reduction Internal Fixation/ ORIF Lower Extremity.

Method: The design in this study is descriptive observational. The samples studied in this study were patients with lower extremity fractures after ORIF who underwent treatment at the Orthopedic Polyclinic of RSUDZA Banda Aceh with a total of 110 samples using simple random sampling technique. The research instrument used was WHOQOL (World Health Organization Quality of Life).

Results: The results of this study showed that from 110 samples, 96 samples (87.3%) had good quality of life overall and 14 samples (12.7%) had poor quality of life.

Conclusion: An overview of the quality of life of post-ORIF lower extremity fracture patients at dr. Zainoel Abidin mostly has a good quality of life.

Keywords: quality of life, lower extremity fracture, ORIF

The effect of lateral wedge insoles on pain improvement of patients with knee osteoarthritis grade 2 medial

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Introduction: The most prevalent joint condition that causes functional disability in patients is knee osteoarthritis (OA). Lateral wedged insoles (LWI), one type of walking aid, are crucial for medial compartment knee OA. The aim was To assess the benefit of reducing pain response after 2 weeks of using LWI with varying degrees of slope.

Methods: This research was carried out at the Orthopedic Polyclinic of Dr. Zainoel Abidin Regional General Hospital Banda Aceh in July–August 2022 as a prospective cohort study with an experimental design. The Western Ontario and McMaster Universities Arthritis Index (WOMAC) scores were used to evaluate

the severity of the disease, including the quality of knee pain, in knee OA patients who met the inclusion and exclusion criteria. The patient was given LWI at three different inclination angles, namely 7, 8, and 9. The WOMAC ratings were reassessed and compared between the three LWI angles after utilizing LWI for two weeks. Graphpad Prism 9 software was used to analyze the data, and a p-value of 0.05 was deemed statistically significant.

Results: From a total of 36 patients (12 patients per treatment group), 31 patients (86.1%) were female, with an average age of 55.2-62.8 years. In this study, WOMAC scores improved significantly following LWI treatment at all angles of inclination, but the tilt angle of 8 degrees produced the most improvement. Significant improvement in pain scores for all LWI slope inclinations ($p < 0.0001$), with an 8-degree LWI providing the greatest improvement in pain scores ($p < 0.0001$).

Conclusion: The use of LWI for 2 weeks with a tilt angle of 8 degrees significantly reduced pain better than the inclination angle of 7 and 9 degrees in patients with knee OA.

Keywords: osteoarthritis, WOMAC, LWI, 8 degrees

Determinants of stunted children in Pidie District, Aceh Province, Indonesia

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Introduction: Stunting in children results from several factors, namely nutrition, health, sanitation, and the environment. Based on the 2021 Indonesian Nutrition Status Study results, one of the five districts with the highest prevalence of stunting in Aceh Province is Pidie District at 39.3%. This number is above the national, which is 24.4 % in 2021. This study aims to determine the relationship between stunting determinants: maternal age, maternal infectious disease, the children's age, sex, and infectious disease in Pidie District, Aceh Province.

Methods: A cross-sectional study was conducted using questionnaires to 25 children and mothers in Simpang Tiga sub-district and 35 children and mothers in Kembang Tanjong sub-district, Pidie District, Aceh Province. Chi-Square data analysis is used, and the level for statistical significance is $p < 0.05$.

Results: The number of children with stunting in Simpang Tiga sub-districts and Kembang Tanjong sub-district is 14(56%) and 14(40%), respectively. The relationship for all the stunting determinants in the Simpang Tiga sub-district is not significantly different that were maternal age ($p=0.404$), maternal infectious disease ($p=0.897$), the children age ($p=0.346$), the children of infectious diseases ($p=0.173$) and the children sex ($p=0.561$). Meanwhile, in the Kembang Tanjong sub-district, the stunting determinants that play a role significantly different are maternal age ($p=0.002$) and the children's sex ($p=0.010$). In contrast, determinants that are not significantly different are maternal infectious disease ($p=0.445$), the children's age ($p=0.096$), and infectious disease ($p=0.298$).

Conclusion: There is no relationship among all stunting determinants in the

Simpang Tiga sub-district. However, maternal age and the children's sex are related to stunting in Kembang Tanjong sub-district, Pidie district.

Keywords: Stunting, toddler, infectious diseases, maternal age, sex

Clinical efficacy of intralesional injection of platelet-rich plasma (PRP) in psoriasis vulgaris patients: a case series

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Introduction: Psoriasis vulgaris (PV) is a chronic inflammatory skin disease characterized by erythematous thick, scaly plaques. This disease usually reduces the patient's quality of life and requires long-term treatment due to the high recurrence. There are several modalities for PV treatment, but 50% of patients are still unsatisfied with the results. PRP has now become a promising modality in dermatology and is widely used for scar treatment, wound healing and rejuvenation. PRP is known to have anti-inflammatory and immunomodulatory effects, so it is assumed to be useful in chronic inflammatory diseases such as psoriasis. Only a few studies have investigated the benefit of PRP on PV with PASI as the outcome, but assessment related to the quality of life has not been reported.

Case report: We reported 3 patients with PV. The first case is a male, 64 years old, with PASI 16.8 and DLQI 8. The second case is a male, 48 years old, with PASI 9.6 and DLQI 8. The last case is a male, 78 years old, with PASI 8.8 and DLQI 6. Before treatment, patients underwent blood laboratory checks, including complete blood count and CT/BT. All patients treated with PRP that injected intralesional once every 2 weeks for 1 month. The patients also received topical therapy of 3% salicylic acid and vaseline album. 2 weeks after the last injection, the treatment result was very satisfactory; PASI and DLQI decreased.

Discussion: PRP acts as an anti-inflammatory by suppressing NF- κ B, which is a crucial mediator in the pathogenesis of psoriasis. The release of multiple growth factors during PRP injection in the psoriasis area may alleviate the inflammatory response and augment the healing process.

Conclusion: The efficacy of PRP for psoriasis vulgaris is highly effective. Administration of PRP in PV patients can reduce PASI and DLQI scores and be relatively safe with minimal side effects.

Keywords: Psoriasis vulgaris, platelet-rich plasma (PRP), PASI, DLQI

Cervicofacial flap for reconstruction of the malar defect following basal cell carcinoma-wide excision

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Introduction: There are various options for reconstruction of soft tissue defects following wide excision of basal cell carcinoma in the malar area, including a skin graft, local flaps, and free flaps. A microvascular free flap is usually the standard procedure for facial skin defects but is a lengthy surgical procedure. Therefore, many elderly and those with serious complications cannot undergo this surgery. Local flaps, including cervicofacial flaps, can be the alternative for those patients. In addition, it has matching color and texture to the face and is suitable for lax skin in the elderly.

Case Report: A 59-year-old female presented with ulceration on her right cheek for one month. Previously, a mole appeared 5 years ago, itchy and bled easily. The history of systemic disease and smoking was denied. Physical examination revealed wound size 2 cm x 4 cm, granulation base, partially covered with black crusts, irregular surface, easily bleeding, and hyperpigmentation of surrounding skin. Histopathology examination revealed pigmented solid basal cell carcinoma. She was planned for a combined procedure consisting of wide excision, biopsy, and defect reconstruction with a local flap. The patient was in a supine position with general anesthesia. After prepping and draping, a wound excision design was performed with a margin of 1 cm, and a cervicofacial flap incision design was performed. The patient was injected with Pehakaine infiltration injection, and the mass was excised while controlling bleeding. After complete excision, flap incision was performed according to flap design.

The incision line was drawn from the lateral side of the tissue defect and carried straight until the preauricular crease. The entire flap was elevated in a subcutaneous plane along the mandible's lateral aspect to enhance the flap's reach and rotation. After that, placed a drain using an 8.0 nasogastric tube to prevent hematoma and seroma. We sutured the wound in layers with absorbable 5.0 and non-absorbable 6.0. The wound in the malar region was closed with Steri-Strips and the rest area with Gentamycin eye ointment and sterile gauze. The surgery was uneventful, and there were no postoperative complications. The color and texture of the flap match with skin color, and the patient was satisfied with the aesthetic outcome of the flap.

Conclusion: This report showed that the cervicofacial flap could be the alternative for reconstruction of the malar defect following wide excision of basal cell carcinoma with satisfactory functional and aesthetic results, especially in the population who cannot tolerate long-term surgery or minimal resources for microvascular surgery.

Keywords: Cervicofacial flap, malar defect, reconstruction, basal cell carcinoma, wide excision

Latissimus dorsi musculocutaneous pedicled flap as a method for closing large defect of proliferating trichilemmal tumor on posterior coli: a case report and systematic review of literature

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Introduction: Latissimus dorsi musculocutaneous flap has been reported in the literature as a pedicled flap. Because of the two axial vascular supplies, the flap is robust and can be used to cover large defects. This report aims to discuss the reconstruction of posterior trunk defects compared with the existing literature.

Method: A comprehensive search was conducted using PUBMED, EBSCO, and SCOPUS, for articles published during January 2020-August 2022 following "Preferred Reporting Items for Systematic Reviews and Meta-Analyses" (PRISMA) guidelines, using "latissimus dorsi"; "musculocutaneous flap"; "reconstruction"; "posterior trunk".

Result: In total, 17 articles were identified, and 2 studies were included in the database. The studies reported the implementation of latissimus dorsi muscle in breast cancer and giant proliferating trichilemmal cyst. Latissimus flap transfer is indicated in reconstructing large head, neck, and chest defects, whenever a defect requires broad soft-tissue coverage. In our case, a patient with increasing trichilemmal cystic carcinoma in the posterior trunk was treated with radiotherapy and 2 cm safety margin tumor resection. A large defect measured 22x25 cm was closed with the entire latissimus dorsi muscle as a pedicled flap. Split thickness skin graft from left femur used for closing the flap. At the 11-month follow-up, the coverage and the functional result were satisfactory. The latissimus flap often provides excellent skin for the head, neck, and torso areas. Many wound defects that are too large are treated with LD flap.

Conclusion: In this case report, the entire latissimus dorsi muscle was used as a pedicled flap based on a single thoracodorsal artery perforator to close the extensive wound. In our case, wounds caused by high-dose radiation mostly lack adequate recipient vessels for free flap procedures, and good outcomes were achieved and no flap failures or dehiscence.

Keywords: Latissimus dorsi, musculocutaneous flap, trichilemmal tumor

Pedicled abdominal flap as an option for hand reconstruction in the modern age of microsurgery

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Introduction: Pedicled abdominal flaps for hand reconstruction has been acknowledged and well-established for many years. However, several disadvantages include the cumbersome positioning of the hand, two-step procedure, increased hospital stay and the problem of hand therapy delay that leads to stiffness. Nevertheless, pedicled abdominal flaps are still being used when free flaps cannot be done because of the paucity of recipient's vessels or infrastructural inadequacies or when they fail

Case report: A 24 years old male with a lacerated right hand from a meat cutter incident. Open wound on the ulnar side of the palm, fractured 2nd to 5th metacarpal bone, ruptured Common Palmar Digital Artery, exposed vital structures for which loco-regional flaps were not feasible. X-ray showed complete fracture metacarpal shaft of the 2nd to 5th digit. The orthopedic and cardiothoracic surgery team did an emergency debridement and Open Reduction Internal Fixation of the fractured metatarsal bone, exploration, and vascular ligation. Eleven days post-operation, the 4th and 5th digit of the right hand turned dark blue with a half-full pulp. Oxygen saturation was not detected, the prick test was negative and negative finger range of motion. The patient was consulted for Plastic Surgery for debridement and disarticulation of the 4th digit at the DIP Joint level and the 5th digit at the level of the PIP joint and defect closure with pedicled abdominal flap. The patient was followed up for 5

days in the hospital, then scheduled for a regular check-up for wound cleansing and evaluation. The next surgery is scheduled for flap division 4 weeks after surgery. The flap was incised, and the 5th digit was pinned with K-wire 0.8 mm up to MCP level. For the rest of the wound, a skin graft was used for wound closure

Discussion: When free flaps cannot be done due to the paucity of the recipient's vessels or infrastructural inadequacies or when they fail, pedicled flaps serve as a better option. These flaps may be designed widely in the inguinal region. The infra-umbilical part of the abdomen and the lateral aspect of the trunk serve as common pedicled flaps donors. These flaps are well-vascularized tissues; hence the flaps could be designed to fit the defect to increase vascular ingrowth. It is possible to keep the base narrow to include the vessels in the pedicle. If the base is broad, the flap does not match the defect, resulting in the flap's unevenness at the time of suturing with cosmetically unacceptable results.

Conclusion: Pedicled abdominal flaps for hand reconstruction has been acknowledged and well-established for many years, and a surgeon needs to harness the benefit of these technique. Even though a free flap may have the advantage of a single-stage procedure and less inpatient time, a Pedicled flap can give the same result if not better outcome and can cover a large area and also an intricate area where it needs to be reshaped to match the defect that needed to be closed. Careful planning and adequate education of the patient are key to achieving a great result in using these techniques

Keywords: Pedicled abdominal flap, groin flap

Initial management of fractures in multiple trauma patients: a case series

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Introduction: First aid and preliminary care in an emergency room play an important role in treating patients with severe injuries, which remains a challenge today. When treating injured patients, clinicians rapidly assess injuries and institute life-preserving therapy with a systematic approach called "initial assessment". Severe injuries such as multiple trauma that implies the presence of two or more separate injuries cause grave damage, including long-term disability. In multiple trauma, fractures are one of the most common injuries that need initial management rapidly and accurately. Management of fractures in multiply injured patients must consider the general condition and presence of other injuries.

Case Series: First, an 18-year-old man presented with an open wound of the left antebrachial and a deformity of his right foot because he was attacked and slashed with a blade by some unidentified people. The patient was conscious. In the emergency setting, the patient was done with a primary survey and then laboratorium and x-ray examination. The patient was diagnosed with an open fracture of the left ulna, right 3rd base, 4th shaft metatarsal and multiple lacerated wounds on the head, right thigh and right leg regions. In the second case, a 34-year-old man presented pain in the upper and lower left extremity and right pelvis region because of a motor vehicle collision. After initial assessment, the patient was conscious and diagnosed with a closed fracture of the left proximal humerus, left shaft femur, right superior, and inferior pubic rami. Unfortunately, the patient was diagnosed with an arrhythmia and anterosseptal ischemia too. In the third case, a 61-year-old man presented with pain in the right upper

extremity after being hit by the train and thrown 1 meter away. After the incident, the patient was unconscious and didn't remember exactly what had happened after they woke up. The patient was diagnosed with a closed fracture right scapula, right shaft radius, right shaft ulna, right AC disruption, mild head injury, liver trauma and spleen injury.

Discussion: In many centers, trauma patients are assessed by a team whose size and composition vary from institution to institution. In the first patient, the orthopedic treatment is done without changes in the standard management of trauma in musculoskeletal. In the second case, management for the musculoskeletal setting was canceled because of arrhythmia and anterosseptal ischemia. In the third case, damage control surgery was done because of liver trauma and spleen injury.

Conclusion: Treatment procedures for orthopedics are not always the same for every case in the emergency setting, but the emergency team must pay attention to the general condition and other injuries of the patient so that the patient will get an accurate diagnosis and treatment.

Keywords: Initial management, multiple trauma, fracture, emergency medicine

Arteriovenous fistula (av-f/shunt) as hemodialysis access in end-stage renal disease (ESRD) patients: profile, complications and clinical outcomes in Ben Mboi District Hospital, Ruteng, Flores, Indonesia

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Introduction: End-stage renal disease (ESRD) is one of the world's largest causes of death and has become a global burden. AV fistula, one of the vascular access modalities in hemodialysis as End Stage Renal Disease (ESRD), has its indications, benefits, drawbacks, and issues.

Purpose: To show Arteriovenous Fistula profile, complications and outcomes in Ben Mboi District Hospital, Ruteng Flores Indonesia

Method: An analytical study design using a cross sectional approach was employed in this study. Using medical record data from 2019 to 2022, all men and women who received hemodialysis through arteriovenous fistula were included. Bivariate analysis was carried out from baseline data such as age, sex, comorbid diseases causing kidney failure, and an av fistula (AVF) location, with complications that arise using Chi-square.

Results: Age, sex, hypertension and AV Fistula creation location has no significant correlation with complications such as failure to mature, thrombosis, infection, and venous hypertension. Diabetes mellitus has a significant correlation with the occurrence of failure to mature ($p=0.012$), thrombosis ($p=0.014$), and venous hypertension ($p=0.08$). Obesity significantly correlates

with failure to mature ($p=0.000$) and thrombosis ($p=0.000$). The previous insertion of CDL in the right subclavian vein has a significant correlation with the occurrence of venous hypertension ($p=0.000$).

Conclusion: Age, sex, hypertension and AV Fistula creation location has no significant correlation with all complications of AV Fistula. Diabetes mellitus significantly correlates with complications such as failure to mature, thrombosis and venous hypertension. Obesity has a significant correlation with the occurrence of failure to mature and thrombosis. History of CDL insertion in the right subclavian vein significantly correlates with venous hypertension.

Keywords: End-stage renal disease, hemodialysis access, arteriovenous fistula, complications

Pregnancy with confirmed COVID-19 in omicron outbreak phase

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Background: COVID-19 has been a global issue since 2019. Indonesia is one of the countries that has been affected by COVID-19, which has several viral strains and variants, one of them is Omicron. The clinical manifestations of Omicron are considered milder than other types of COVID-19. Nonetheless, Pregnant women are more susceptible to get an infection from this variant.

Cases: We report 4 cases of pregnant women with COVID-19 in the omicron phase from January until July 2021. Infants who are born from symptomatic COVID women are predisposed to respiratory distress syndrome (RDS) and require special care in NICU. Transmission of COVID-19 from mother to fetus is still unclear. COVID-19 infection causes hypoxia and induces cytokine storm. The increase of systemic inflammation and infection of placental cells can disturb vascular perfusion, causing vascular thrombosis and massive infection that lead to intrauterine growth restriction (IUGR), preterm labor, increased perinatal death, miscarriage, pre-eclampsia and greater number of caesarean sections.

Conclusion: The etiology of RDS in infants from women infected by COVID-19 can be caused by surfactant deficiency due to AT2 cell damage, surfactant-producing cells that are the target cells of this virus. Exclusive Breastfeeding must be given based on the standard guidelines by applying preventive and infection control measure, another option is to feed the infants with pumped breast milk. If it is not possible, then re-lactation or breast milk donor should be considered.

Keywords: COVID-19, fetomaternal outcome, surfactant, pregnancy, breast milk.

Progressive ovarian Sertoli – Leydig cell tumor: a case report and a literature review

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Introduction: Ovarian Sertoli – Leydig cell tumor (SLCT) is one sex cord

tumor with an incidence rate of less than 0,2% of all ovarian tumors. It occurs predominantly in the second and third decades of a lifetime. It has characteristics mostly low-grade malignant, although poorly differentiated type may behave more aggressively. Clinical characteristics of ovarian SLCT are usually hormonal changes. Nevertheless, in patients without hormonal changes, the manifestation of the disease consists of abdominal pain, abdominal enlargement, and palpable adnexal mass on physical diagnostic.

Case: a 52 years woman undergoing right salpingooforectomy 5 months prior with PA result shows poorly differentiated Sertoli – Leydig cell tumor, and refusing chemotherapy. She came with a chief complaint of abdominal enlargement for 3 months, accompanied by lower abdominal pain 2 weeks prior. Ultrasound examination shows cystic ovarian neoplasm with solid part size 9 x 9 x 9 cm from left adnexa. Tumor marker that arise are alpha-fetoprotein (AFP) = 52 ng/mL and lactate dehydrogenase (LDH) = 432 U/mL which correspond to sex cord tumor. She has undergone Laparotomy, Total Abdominal Hysterectomy, Left Salpingooforectomy, and chemotherapy afterward.

Conclusion: Ovarian Sertoli – Leydig cell tumor (SLCT) is a rare sex cord ovarian tumor that may behave more aggressively as it is poorly differentiated. It has manifestations of hormonal changes and also abdominal enlargement.

Keywords: Ovarian tumor, ovarian cancer, Sertoli – Leydig cell tumor

Successful management of burn injury treated with combined topical astaxanthin and gentamicin: a case series

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Introduction: Management of burn injury is challenging, and delay in treatment can result in poor outcomes. Early intervention can prevent the progression of wound depth and size and prevent scar formation. A scar-free outcome is one of the goals of burn management in dermatology, so the use of initial care and treatment is essential. Besides inflammatory reactions, burn injuries can become contaminated and infected. Astaxanthin is a strong antioxidant useful in wound healing, including burn injury. Using astaxanthin with topical antibiotics can avoid the risk of infection in burns. Only a few studies have investigated the benefit of topical astaxanthin on burn injury in animals, but in humans has not been reported.

Case report: We present 2 patients with burn injuries. The first case is a boy, 3 years old, with burn injury grade II involving 18% of total body surface area (TBSA). The second case is a boy, 2 years old had burn injury grade II involving 2% of TBSA. One hour after the burn, the patients received a combination of topical astaxanthin and gentamicin 3 times a day for approximately 2 weeks. The treatment results were excellent; complete reepithelialization occurred within 1 week, and there was no visible scar formation.

Discussion: Astaxanthin is considered one of the most powerful antioxidants. In burn injury, astaxanthin suppresses inflammation, protects against oxidative stress-induced cell or tissue damage and reduces cell apoptosis. Gentamicin, a topical antibiotic, works as a prophylactic to prevent further infection. Applying combined topical astaxanthin and gentamicin in the early stage of a burn injury can accelerate wound healing and promote re-epithelialization.

Conclusion: Combining topical astaxanthin and gentamicin for early burn injury grade II is highly effective. Early appropriate intervention is the key to the successful management of burn injuries.

Keywords: Burn injury, astaxanthin, gentamicin, reepithelialization, wound healing

The role of the D-dimer test in VTE

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D-dimer is a product formed from the degradation of cross-linked fibrin by fibrinogen which is a marker of ongoing coagulation and accompanied by fibrinolysis. Venous thromboembolism (VTE) is divided into two types, namely deep vein thrombosis (DVT) and pulmonary embolism (PE). The measurement of D-Dimer in diagnosing VTE generally consists of three categories: enzyme-linked immunosorbent assay (ELISA), latex-based immunoassays, and latex-based automated assays with immunoturbidimetric reading. The role of D-dimer in diagnosing DVT has been investigated since 1990 using several methods. Each method has its advantages and disadvantages. The microplate ELISA test was considered for comparison because of its accuracy, qualitative and ability to assess D-dimer in low concentrations. Excluding a disease requires a high sensitivity value, a quantitative cut-point value of D-dimer 300 g/L fibrinogen equivalent units (FEU). Pulmonary embolism can occur due to a thrombus originating from leg veins, pelvic veins, upper limb veins or the right heart. In diagnosing PE, there is a standard that is pulmonary angiography, but due to high costs and side effects, its use is never done in an emergency. The use of D-dimer is a non-invasive method that can be used to diagnose PE. PE patients detected using Computer Tomography-Angiography were then tested for D-dimer HemosIL D-dimer and Tinaquant with Cut Off >832 ng/mL and >1270 ng/mL. Not only in Current thrombosis determination but D-Dimer is also used to diagnose non-VTE cases such as aortic dissection, acute coronary syndrome and cerebrovascular disease. D-dimer can also signal complications due to myocardial infarction. The increase in the value of D-dimer is associated with the extent of infarct volume in stroke patients.

Keywords: D-dimer, VTE, DVT, PE

The Relationship of statin used in dyslipidemia patients with the incident of diabetes mellitus

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Diabetes is a metabolic disease caused by pancreas disorders, causing a lack of insulin production or the cessation of insulin production. Diabetes is characterized by hyperglycemia, which is high levels of sugar circulating

in the blood. Patients with diabetes usually have obesity, hypertension, or dyslipidemia. The use of statins in dyslipidemia patients serves as a lipid-lowering drug. It is the first-line therapy for dyslipidemia which can reduce levels of total cholesterol, low-density lipoprotein cholesterol (LDL-C), triglycerides (TG), and increase high-density lipoprotein cholesterol (HDL-C). The main purpose of using statins is an effort to lower the risk of cardiovascular disease. However, long-term use of statins can be a risk factor for diabetes in non-diabetic dyslipidemia patients. It is caused by an increase in glucose in the liver due to the gluconeogenesis process, impaired insulin sensitivity, decreased function of glucose transporters, and the induction of changes in free fatty acids in the body. Therefore, the importance of discussion related to the use of statins in non-diabetic dyslipidemia patients with the incidence of diabetes mellitus so that the use of statins in groups at risk of diabetes must use properly and other treatment options can be given.

Keywords: Statin, dyslipidemia, diabetes mellitus

Management of fallopian tube cancer: a case report

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Introduction: Primary cancer of the fallopian tubes is a rare case of female genital tract malignancy. The incidence has increased over the past decade, ranging from 2.9/1,000,000 to 5.7/1,000,000. Fallopian tube cancer has no specific clinical manifestations. A Preoperative fallopian tube cancer diagnosis is difficult, especially in the early stage. Surgery is the choice of treatment for fallopian tube cancer. Microscopy interpretation may be found in further metastasis, which can increase the recurrence of ill. However, chemotherapy can be an adjuvant treatment for the early-stage patient.

Methods: A 39-year-old woman has complained of abdominal pain since 6 months ago. Abdominal examination found the abdomen was soft, and a cystic mass had been palpated as high as two fingers below the umbilicus, with mobile and positive tenderness. An immunoserology test of tumor markers was performed with the results of CA-125 126.9 u/ml, CEA 20.37, and CA19-9 59.09. Calculating the risk of malignancy index (RMI) obtained 126, which means the impression of Intermediate risk of malignancy. Ultrasound examination revealed a cystic ovarian neoplasm with uterine myoma. On intraoperative, the right ampullary tube appears enlarged to a size of 9 x 6 cm. Management of this patient included primary surgery with dextra salpingo-oophorectomy laparotomy. An analysis of anatomical pathology samples showed that the fallopian tube mass was a type of adenocarcinoma. The patient was treated with chemotherapy for six cycles. After three cycles of chemotherapy, the patient will undergo tumor debulking interval surgery.

Conclusions: Surgery is the treatment of choice for primary fallopian tube cancer. The principle of surgery is the same as for ovarian cancer. Aggressive cytoreductive surgery with removal of as much of the tumor as possible is required in patients with advanced disease. If optimal debulking is not possible, despite maximum efforts, the operation should be attempted again after

several rounds of chemotherapy. The consideration of very aggressive surgery in the patient is highly individualized based on the solid predisposition to the lymphatic spread of the tumor.

Keywords: Fallopian tube cancer, chemotherapy, tumor debulking interval

Assessment of knowledge level among health care workers toward COVID-19 prevention in the operation room of General Hospital dr. Zainoel Abidin Banda Aceh 2020-2021

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Background: As the COVID-19 pandemic continues to expand and spread worldwide, healthcare facilities are intensifying measures to protect patients and healthcare workers from this highly contagious disease. The spread of the COVID-19 virus in health facilities is mostly from asymptomatic patients and health care providers. Facility-based measures have been put in place to reduce the spread of COVID-19 and its impact on the health system. These measures include using personal protective equipment (PPE) when handling patients, testing, isolation and treatment of symptomatic patients, and close contact tracing. The readiness of the operating room in the face of the COVID-19 pandemic is very important to minimize the possibility of transmission between patients and medical personnel. This study aimed to describe the knowledge level among health care workers toward COVID-19 prevention in the operation room of general hospital dr. Zainoel Abidin Banda Aceh in 2020-2021.

Methods: This descriptive study uses primary data from a questionnaire.

Results: A total of 38 research samples met the inclusion criteria: surgical nurses, anesthesiologists and operating room cleaning services. The study's results found that the average respondent was 31-50 years old. Then the majority of respondents are male, as many as 25 (65.8%). Data analysis shows that the knowledge level of health care workers toward COVID-19 prevention in the operating room is high, where all respondents scored above 75.

Conclusion: It can be concluded that health care workers in the operating room of RSUDZA have sufficient knowledge to prevent transmission of COVID-19.

Keywords: COVID-19, health workers, knowledge, prevention of COVID-19, operating room

Ruptured pseudoaneurysms in patients with comorbid hypertension, diabetes mellitus, acute exacerbations of COPD, and chronic renal failure: a case report

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Background: Pseudoaneurysm (PSA) is the most common complication of interventional procedures and occurs due to inadequate closure of the insertion site.

Case: Male, 62 years old, complained of swelling of the left arm accompanied by redness and pain. A history of fever was found. Patients with a history of arteriovenous (AV) shunts for indication of chronic renal failure. The patient also suffered from hypertension, type 2 diabetes mellitus, and chronic obstructive pulmonary disease (COPD). The patient was diagnosed with brachial artery PSA with stage I hypertension in hypertensive heart disease (HHD), type II diabetes mellitus, acute exacerbation of COPD, and stage V chronic kidney failure on regular hemodialysis. The patient was planned to undergo brachial artery repair with an interposition graft.

Discussion: PSA is a pulsatile mass due to a vascular lesion with capsule formation after soft tissue hemorrhage. It usually develops into a consistent fibrous capsule that communicates with the wall of the injured artery. Pain and swelling are the most classic presentations. Treatment options for brachial artery PSA are simple ligation and excision, primary or secondary revascularization, endovascular stent placement, percutaneous thrombin injection, and ultrasonography (USG)-guided compression.

Conclusion: PSA is caused by intervention measures due to local wound access closure failure. Brachial artery PSA is a rare complication of interventional procedures. The sooner PSA is detected, the faster management can be given to the patient.

Keywords: pseudoaneurysm rupture, brachial artery, hypertension, diabetes mellitus, chronic kidney failure

Characteristics of perianal fistula patients undergoing surgery in the Digestive Surgery Section of RSUD dr. Zainoel Abidin Banda Aceh in 2020

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Background: Perianal fistula is a channel that forms between the anal canal and the rectum with the skin around the anus and requires intervention. There are 20,000 to 25,000 new cases of perianal fistula in the United States each year. If not treated properly, then the risk of complications will increase. The purpose of this study was to assess the prevalence and characteristics of perianal fistula patients in the digestive surgery section of RSUD dr. Zainoel Abidin.

Methods: This is a retrospective descriptive study with a cross sectional design through the patient's medical records. This study was conducted on every patient who visited the digestive surgery section at RSUD dr. Zainoel Abidin Banda Aceh, as of January 1, 2020 - December 31, 2020. In addition to reviewing the characteristics of the wound, the highest age range is 30-39 years old, followed by 40-49 years old, then 50 years old. While the age range with the least number of patients is 20-29 years

Results: Perianal fistula patients who underwent surgery in the digestive surgery section of RSUD dr. Zainoel Abidin throughout 2020 totaled 14 people. There were 11 male patients, while 3 female patients. The largest age group is between 30-39 years, totaling 5 people. The minimum age group is between 20-29 years, totaling 2 people.

Keywords: Cross sectional, perianal fistula, characteristics

Characteristics of adolescent idiopathic scoliosis patients at DR. Zainoel Abidin Hospital 2017-2021

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Background: Adolescent idiopathic scoliosis (AIS) is the most common form of idiopathic scoliosis. AIS occurs in individuals between the ages of 10 and 18 years. Scoliosis treatment includes conservative, bracing, or surgery. The purpose of this study was to see the characteristics of AIS patients in RSUDZA from 2017 to 2021.

Methods: A total of 28 patients who met the inclusion criteria were research subjects. Furthermore, secondary data was taken from the patient's medical record. The data obtained were analyzed descriptively using a frequency distribution table.

Results: Of the 28 AIS patients, 23 (82.14%) were female and 5 were male (17.8%). Patients aged 16 years 8 people (28.5%), 15 years 6 people (21.4%), age 18 years 4 people (14.2%), 13 and 14 years old 3 people (10.7%) and 10, 11, 12, and 17 years 1 person (3.5%). AIS from Aceh Besar district were 6 people (21.4%), Pidie district 5 people (17.85%), Pidie Jaya district, Aceh Tamiang, and Langsa city 3 people (10.7%). AIS with thoracolumbar type was 22 people (78.57%) with lumbar type and thoracic type 5 people (17.85%) and 1 person (3.5%). Patient care for 9 days is 8 people (28.57%), 5 patients (17.85%) for 7 days and 8 days. The main complaint was spinal asymmetry, 17 people (60.71%), 8 people (28.57%) had spinal pain and the remaining 3 people (10.71 percent) had stiff spine. The Cobb Angle is 45.78 degrees, with 46.04 degrees for women, 44.83 degrees for men.

Conclusion: Most of the patients were women with a maximum age of 16 years, most were from Aceh Besar district, had a chief complaint of spinal asymmetry, and on average had thoracolumbar scoliosis.

Keywords: Scoliosis, Adolescent idiopathic scoliosis (AIS)

Resection and anastomosis of lacerated ileum in hemodynamically unstable patient

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Introduction: Anastomosis of the intestinal is a procedure to reconstruct intestinal continuity after removing a pathologic condition affecting the bowel and is one of the most performed surgical procedures in both elective the emergency setting.

Case description: A 14-year-old patient came with a history of penetrating trauma and was hemodynamically unstable. Besides complete blood count, no imaging studies and another laboratory examination were checked on this patient due to hospital sources' limitations. An emergent exploratory laparotomy was performed. On exploration, ruptured the inferior epigastric artery and lacerated ileum was discovered. We performed resection and hand-sewn end-to-end anastomosis in this patient. After surgery, the patient

recovered and was discharged on the 7th postoperative day. No major complaints and postoperative complications on his follow-ups.

Conclusion: Intestinal anastomosis should consider patient factors, surgeon experience and intraoperative findings before making a final decision regarding the technique.

Keywords: abdominal trauma, resection, anastomosis, unstable hemodynamic, ileum

Reconstruction with rhomboid flap in infantile hemangioma

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One of the common childhood vascular tumors is hemangioma which occurs in some populations. Usually, these tumors regress spontaneously, and treatment is unnecessary until the proliferation interferes with the child's normal functioning. The outcome of the risk is seen as a treatable facial defect. Treatments such as laser therapy, drug therapy and surgery are options for hemangiomas. This case report reports that a 6-month-old child came to the clinic with complaints of recurrent bleeding in the lump near the right temple for the past 1 month. Initially, the bleeding stopped on its own, but when it was repeated for the fourth time, the bleeding continued, so the patient had to be brought to the ER at Wangaya Hospital. The patient was diagnosed with Infantile Hemangioma temporal region D with recurrent bleeding and planned for Excision + Biopsy + Reconstruction of the defect lid with Rhomboid Flap kp FTSG. On post-op examination day 1, the patient was well aware, strong cry, active movement, seepage in the post-op wound (-), fever (+), and oral intake (+) good. The patient was hospitalized for 3 days, discharged in good condition, and planned for control. In the control patient, 21 days after surgery, there were no complaints, and an open wound was treated.

Keywords: Infantile hemangioma, rhomboid flap, vascular tumor

Risk Factors for malocclusion in patients with mandibular fractures within 3 Months Post Open Reduction and Internal Fixation Surgery at Prof. Dr. I G. N. G. Ngoerah General Hospital Denpasar

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Background: Open reduction and internal fixation are the gold standard management of mandibular fractures with the primary goal is restoring premorbid occlusion status. Malocclusion is one of the most common and functionally significant postoperative complications of mandibular fracture. This study aims to determine the factors that influence the occurrence of malocclusion in patients with mandibular fractures 3 months after open reduction and internal fixation surgery at Prof. Dr. I G. N. G. Ngoerah Hospital Denpasar.

Method: This study was an analytic observational study with a retrospective cohort design. The study was conducted at the SMF Plastic Surgery, Prof. Dr. I G. N. G. Ngoerah Hospital Denpasar with data obtained from patient medical records from January 2020 to December 2021. The sample size in this study was 60 samples. Data analysis was performed by SPSS application using chi-square test for bivariate analysis and logistic regression for multivariate analysis.

Results: Age \geq 40 years, mandibular fracture sites in more than one region, complex type of mandibular fracture, involvement of other facial bones fracture, waiting time for surgery $>$ 7 days, and internal fixation with wire are risk factors for malocclusion within 3 months postoperatively. Gender was not statistically associated with the incidence of malocclusion post operation (p-value 0.705). The combination of internal fixation with maxillo-mandibular fixation (MMF) was a preventive factor for postoperative malocclusion (RR 0.4 (CI: 0.23-0.99)). The results of the multivariate analysis showed that the number of fracture locations in more than one region gave the highest effect on the occurrence of postoperative malocclusion by 131.7 times.

Conclusion: The risk factors for malocclusion in mandibular fractures post operatively are age \geq 40 years, mandibular fracture sites in more than one region, complex type of mandibular fracture, involvement of other facial bones fracture, waiting time for surgery $>$ 7 days, and internal fixation with wire.

Keywords: malocclusion, mandibular fracture, MMF

Clinical manifestations and surgical approach of retrosternal goiter

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Background: Retrosternal goiters are sometimes found in patients with thyroid disease. The incidence of retrosternal goiters among patients with thyroid goiters ranges from 5.1 to 15.7%. These goiters remain in the chest, usually entirely asymptomatic and undetected, until it's discovered as incidental findings. We are reporting a case involving a large retrosternal goiter, which was safely resected via a transcervical and full sternotomy approach.

Case description: A 66-year-old woman visited a hospital due to a chief complaint of difficulty breathing and coughing. No history of trauma. General examination was insignificant. It was a normochest from the inspection, and there is no retraction. A decreasing vesicular sound on the right lung was auscultated by using a stethoscope. A blood examination revealed a TSH level of $<$ 0.05 uIU/ml, and FT4 was 7.61 pmol/l. The chest X-ray showed a tumor shadow in the upper-middle field of the right lung without pleural effusion. Ultrasound showed the suspicion of a mass with calcification in the right thyroid lobe and enlargement of the left lobe. Computed tomography (CT) of the chest revealed that tumor shadows were connected to the thyroid gland. The patient was in a supine position, with her neck well extended. A cervical skin incision was made, a median chest midline incision and a full sternotomy were performed. We identified the tumor-sized 9x6x4 cm after total removal. Under microscopic examination, the tumor was identified as a papillary thyroid adenocarcinoma with follicular cell differentiation variants.

Conclusion: Most retrosternal goiters can be managed through the

transcervical approach, but a full sternotomy is required when a retrosternal goiter extends to both sides of the thorax and/or has a larger diameter than thoracic inlet, or airway constriction is revealed. A full sternotomy provides excellent exposure and can reduce the risk of complications.

Keywords: Retrosternal goiter, thyroid, sternotomy

Achondroplasia in the premature infant

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Introduction: Achondroplasia is a skeletal dysplasia that causes short stature (dwarf). This case is the most common form of skeletal dysplasia with an estimated rate of around 1 in 20.000 birth and affects about 250.000 people worldwide. Still, it has serious co-morbidities and complications, requiring the patient to have long-life assistance.

Case: A 31-year-old woman, G1P0, complained of discharge from the vagina, which was felt 1 day before being admitted to the hospital. Vaginal bleeding is denied. The patient was 34 weeks pregnant with the Last Menstrual Period (LMP) 12/14/2021, estimated delivery date (EDD) of 09/20/2022. Obstetric ultrasound imaging showed a live fetus with a gestational age of 34-35 weeks, EFW 2465 grams Femur Length (FL) 3,89 cm and an amniotic fluid index (AFI) of 7.86 cm. Furthermore, the patient was diagnosed with G1P0A0 34-35 weeks pregnant, premature rupture of membranes, suspected achondroplasia, and fetal distress. Then the patient is prepared to undergo an emergency cesarean section.

Discussion: Achondroplasia is the most common autosomal dominant skeletal dysplasia caused by a recurrent pathogenic variant of the fibroblast growth factor receptor 3 (FGFR3) gene. Establishing a diagnosis of achondroplasia is very difficult during pregnancy. Generally, its anatomical features are not difficult or even invisible on radiographs or ultrasound and analysis of FGFR3.

Conclusion: Establishing the diagnosis of suspect achondroplasia during pregnancy is challenging, especially with inadequate tools and molecular tests that are not yet available. The most appropriate choice of the examination is to perform an ultrasound examination in the third trimester with the results of a shortening of the leg below the third percentile.

Keywords: Achondroplasia, preterm, skeletal dysplasia

The relationship between characteristics and public knowledge of epilepsy in the city of Banda Aceh

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Background: Epilepsy is a neurological disease that can affect people of all ages, races, social levels, and regions. Epilepsy is often surrounded by prejudices and myths due to a lack of public knowledge associated with negative attitudes and beliefs as a stigma against people with epilepsy so that it can affect psychologically which has an impact on decreasing the quality of life of people with epilepsy.

Research Methodology: This study is an observational analytic study with a cross sectional design. The research sample was the people of Banda Aceh City with a total of 312 respondents who were taken using a consecutive sampling technique. The research data was collected by distributing online questionnaires via googleform. Statistical analysis used was Chi-square test, Mann-Whitney, Kruskal-Wallis, and Spearman correlation.

Results: The results showed that most people's knowledge of epilepsy was moderate (43.9%) and there was an increase in knowledge with age with a higher level of knowledge in women (49.8%) than men (32%). The non-aceh ethnic group has a high level of knowledge (62.1%) compared to the Acehnese (42.0%), and the medium and low level of knowledge is dominant from the Acehnese ethnic group (58%). The results showed that the higher the level of education, the higher the level of knowledge of a person and respondents who have a family history of epilepsy have a higher level of knowledge than those who do not have a family history of epilepsy. The results of statistical tests at the 95% significance level (p -value < 0.05) showed that there was a relationship between gender, ethnicity, education level, and occupation with knowledge of epilepsy and there was no relationship between age and family history and knowledge of epilepsy in the people of Banda Aceh City.

Conclusion: This study shows that most of the people of Banda Aceh City have sufficient knowledge of epilepsy and it can be concluded that gender, ethnicity, education level, and occupation are related to knowledge of epilepsy and there is no relationship between age and family history with knowledge of epilepsy in the people of Banda Aceh City.

Keywords: Epilepsy, Knowledge, Society.

Graves disease that occurred after COVID-19 vaccination, how to approach it

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Introduction: Covid-19 vaccine is proven to induce autoimmune reactions, the main target of which is to cause a protective effect by induction of anti-protein S (spike) neutralizing antibodies from various pathways. This response relates to Graves's disease after COVID-19 vaccination. This paper aims to look at the relationship of Graves disease with Covid-19 vaccination.

Case Report: A 60-year-old man with Graves disease developed after 1 month of a booster vaccination with Moderna. Comes with complaints of suffocation, nausea, vomiting and chest pain. During treatment, patients experience clinical aggravation and thyroid crisis, possibly triggered by vaccination and infection. No previous history of thyroid disease. TRAb levels were positive, and thyroid ultrasonography was appropriate for Graves's disease. The literature search in the Pubmed database, from December 31, 2020, to May 24, 2022, used the keywords "COVID-19", "Vaccine", "Thyroid", and "Graves" and found 36 cases of Graves disease that occurred after COVID-19 vaccination from 14 publications.

Discussion: The immune response occurred between 21 and 30 days after the first vaccination, strengthened by the second vaccination, with the highest seroconversion 51 days after the first vaccination. In this review, the median clinical symptoms of Graves disease appeared after vaccination with 24-25 day mRNA-type vaccine, adenoviral vector 14-23 day, inactivated virus 7 days after the first vaccine and 4 days after booster with mRNA vaccine.

Conclusion: It is necessary to be aware of the variability of the immune response related to the impact of vaccines that cause seroconversion with peaks at certain times. Rapid normalization of thyroid function with methimazole and thiamazole suggests that Graves disease that occurs after vaccination can respond well to therapy.

Keywords: COVID-19, vaccine, thyroid, graves disease

The effect of insulin use on diabetes mellitus patients with COVID-19 in the Pinere and RICU Room of dr. Zainoel Abidin Hospital

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Background: Diabetes mellitus patients are a high-risk group for COVID-19. Patients with these comorbidities are likely to suffer further complications and a higher risk of death from COVID-19. The increase in cases of patients suffering from diabetes mellitus with the prevalence of COVID-19 indicates that care for patients with diabetes mellitus should be improved to reduce further complications and the risk of death.

Method: The population in this study were confirmed COVID-19 who had diabetes mellitus co-morbidities and were treated in the PINERE and RICU rooms at RSUD dr. Zainoel Abidin in October 2020. Inclusion criteria were patients diagnosed with type 2 DM and COVID-19 based on the results of RT-PCR and TCM during treatment at RSUD Dr. Zainoel Abidin Banda Aceh. Exclusion criteria were patients with no previous history of hyperglycemia and negative RT-PCR results when first admitted to the hospital. This research is a descriptive study with a cross sectional study design.

Result: From the therapy given, 30 patients needed insulin drip (35.7%). In general, 54 patients used insulin (64.3%). For COVID-19 patients with diabetes mellitus, 72 patients went home with improvement (85.7%), 9 patients died (10.7%), and 3 patients went home for treatment on their request (3.6%).

Conclusion: Insulin drip was given to 30 patients with complications and got a good outcome. Blood sugar levels can predict severity in COVID-19 patients with diabetes. It was also found that patients who received insulin drips were

better at lowering blood sugar and reducing complications and disease severity.

Keywords: Diabetes mellitus, COVID-19, insulin

A preliminary study of male urethral stricture disease in a developing region (Aceh - Indonesia)

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Background: Urethral stricture disease is a narrowing of the urethra due to fibrosis tissue, which leads to obstructive voiding dysfunction with potentially serious consequences for the entire urinary tract. This study aims to evaluate the main aetiologies and clinical characteristics of male urethral stricture disease in Aceh, Indonesia

Method: This study was performed using retrospective data collected from Aceh referral centers of the hospital (dr. Zainoel Abidin Hospital) and Banda Aceh private hospital. The database comprised data from 92 Patients with urethral stricture who had undergone surgical treatment over 5 years from 2018 to 2022. Stricture site, stricture etiology and type of intervention were identified for each patient.

Result: The mean age was 46.55 ± 18.24 years. The most common cause of stricture was trauma (30.4%). Followed by iatrogenic (29.3%), infection (21.7%) and idiopathic (18.5%). Of the iatrogenic cause, 59.4% were secondary to catheterization, 40.6% by other procedures (endourology, hypospadias surgery and prostatectomy). Regarding the stricture site, 76.1% presented with an anterior urethral stricture and 23.9% with posterior urethral stenosis. Direct visual internal urethrotomy (DVIU) was the most common urological procedure to treat urethral stricture (77.2%) compared to urethral reconstruction (22.8%). Urethral reconstruction procedures for urethral stricture continued to increase every year from 2018 to 2022 with 14.3%, 10.5%, 33.3%, 33.4% and 21.7%, respectively.

Conclusion: In Aceh-Indonesia, the most common cause of urethral stricture disease is trauma. DVIU was still the most definitive procedure, but there has been an increase in urethral reconstruction over the period. These findings emphasize that the shifting paradigm to perform Urethral reconstruction in managing USD has begun to be applied. Additionally, iatrogenic, especially catheterization, is still the main cause of many strictures.

Keywords: Urethral stricture disease, characteristics, etiology, DVIU, urethral reconstruction.

Positive outcomes of alternative treatment for toxoplasma encephalitis in AIDS patients: a case report

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Introduction: Opportunistic infections, such as toxoplasmic encephalitis, are more common in AIDS patients because of their weakened immune systems. In HIV patients, toxoplasmic encephalitis presents as a serious neurological crisis. Sulfadiazine with pyrimethamine is the recommended initial treatment for toxoplasmic encephalitis.

Case description: A 32-year-old Acehnese man presented to the emergency room with a two-week history of fever and white patches on his tongue and oral cavity. He also experienced a seizure. After a thorough evaluation, the patient was diagnosed with toxoplasmic encephalitis. The patient was given the alternate regimen of cotrimoxazole (960 mg twice daily) and clindamycin (600 mg four times daily). After six weeks of alternative therapy, clinical improvement was observed. The patient could speak fluently, his appetite improved, he no longer experienced seizures, and he resumed normal activities.

Conclusion: We have reported toxoplasmic encephalitis, which was treated with cotrimoxazole and clindamycin as an alternate treatment for toxoplasmic encephalitis. Clinical improvement was used to assess the success of alternative therapy in a patient with TE. The first-line treatment for toxoplasmic encephalitis is pyrimethamine and sulfadiazine. However, if this first-line treatment option is unavailable, cotrimoxazole and clindamycin can be used as an alternative therapy.

Keywords: toxoplasmic encephalitis, AIDS, cotrimoxazole, clindamycin, alternate therapy

A case series of subacute thyroiditis and COVID-19 in a low resources hospital

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Background: This study aims to increase clinicians' awareness of a COVID-19 manifestation in the thyroid gland, such as subacute thyroiditis.

Methods: This study analyzed nine COVID-19 cases with neck pain symptoms. The clinical presentation, thyroid markers, ultrasound features of the thyroid gland, and its management were described in this report.

Result: There were nine cases, including six confirmed and three probable COVID-19 patients who experienced subacute thyroiditis. All of them were patients in the Clinic of Endocrinology Metabolism and Diabetes - Thyroid Center, Dr. Zainoel Abidin Hospital, Banda Aceh, Indonesia, from January to June 2021. Most of them presented with mild neck pain. All patients had clinical improvement within two weeks to two months after receiving treatments.

Conclusion: Subacute thyroiditis is a painful thyroid gland disease characterized by acute inflammation of the thyroid gland, which can arise during or after a viral infection. This case series emphasizes the importance of physicians' awareness that subacute thyroiditis could be one of many clinical spectra of SARS-CoV-2 infection that should not be missed.

Keywords: Subacute thyroiditis, COVID-19, SARS-CoV-2, neck pain

The effect of transanal endorectal pull through on the defecation function of hirschsprung patients at Dr. Zainoel Abidin Hospital Banda Aceh

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Background: Surgical technique in Hirschsprung disease has developed rapidly and used by many surgeons in the world today is the Transanal Endorectal Pull-Through (TEPT) procedure. This procedure is a surgical technique for hirschsprung's disease that is performed without the use of intraabdominal laparoscopic dissection which is a modification of the Soave procedure. Several prognostic factors have been associated with functional outcomes after TEPT, one of which is defecation function in patients who have been TEPT.

Objective: The purpose of this study was to determine whether there is an effect of TEPT on defecation function in Hirschsprung patients at General Hospital Dr. Zainoel Abidin Banda Aceh.

Methods: A total of 32 patients who met the inclusion criteria were the subjects of the study. Furthermore, the primary data was taken by filling out the questionnaire bowel function score with the category of bad (score < 12), medium (score 12-16) and good (score \geq 17).

Results: Statistical tests using One-sample t-test test on defecation function in hirschsprung patients who have done TEPT, from the results of this study obtained the average defecation function of hirschsprung patients after TEPT action is good (score 17.84). The value of t count obtained is 3.811 and P 0.001 (P<0.05) indicates that there is an influence of TEPT on the defecation function of Hirschsprung patients.

Conclusion: TEPT significantly affected the defecation function of Hirschsprung patients at General Hospital Dr. Zainoel Abidin Banda Aceh.

Keywords: hirschsprung, transanal endorectal pull through (TEPT), defecation function, bowel function score

The effect of the time span of post-craniectomy autograft cranioplasty surgery on peridural tissue attachment and calvarial bone thinning

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Background: Cranioplasty (CP) is one of the most frequently performed neurosurgical operations after decompressive craniectomy (DC). The function of the CP is to reposition the bone flap that was previously removed during the DC. The time span between CP and DC is still a matter of debate, due to inconsistent results between the choice of early cranioplasty (EC) and late cranioplasty (LC). In addition, CP can be accompanied by various complications, including adhesion formation and thinning of the bone graft. Based on those findings, we are interested to investigate the timing for autograft cranioplasty (early and late) after decompressive craniectomy on peridural tissue adhesion and thinning of the calvarial bone. The aim of the study is to investigate the relationship between the timing of autograft cranioplasty surgery after decompressive craniectomy on intraoperative peridural tissue adhesion and thinning of the calvarial bone graft at the General Hospital of dr. Zainoel Abidin Banda Aceh.

Methods: A total of 10 patients who met the inclusion and exclusion criteria were included in this study. This study uses a cross-sectional analytical methodology. Data on the degree of peridural tissue adhesion and thinning of the calvarial bone graft were taken after cranioplasty surgery by a specialist.

Result: Based on the Chi-Square test, there was no statistically significant relationship between the timing of cranioplasty and the degree of peridural adhesion (p>0.05). In addition, the Independent T-Test also did not get a statistically significant relationship between the timing of cranioplasty and thinning of the calvarial bone graft (p>0.05). Nonetheless, our results show that EC is associated with a lower degree of adhesion and a lower percentage of calvarial bone graft thinning than LC.

Conclusion: There was no statistically significant relationship between the timing of cranioplasty and the degree of peridural adhesion and thinning of the calvarial bone. However, our results show that EC has a better outcome than LC.

Keywords: Cranioplasty, Decompressive Craniectomy, Adhesion, Bone Flap Resorption

Prevalence and early detection of amblyopia in students of SDIT Hafizh Cendekia Banda Aceh

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Background: Amblyopia is a decrease in visual acuity in one or both eyes that cannot be corrected with glasses, with no structural abnormalities in the eye. The prevalence of amblyopia in the literature ranges from 0.7% to 5.0% and is very common in childhood. Amblyopia can be prevented or cured with timely detection and intervention. This study aims to determine the prevalence of amblyopia and detect risk factors for amblyopia in students of SDIT Hafizh Cendekia Banda Aceh.

Methods: Design research used an observational descriptive with primary data collection as anterior segment examination, and visual acuity examination used Snellen chart, pinhole, and trial lens. Students with refractive errors that cannot be corrected maximally will continue with posterior segment examination and streak retinoscopy examination. The sampling technique in this study used the total sampling method with an amount sample of 225 elementary school students aged 6-12 years.

Results: The results showed that the prevalence of amblyopia in SDIT Hafizh Cendekia Banda Aceh students was (0.89%). Based on age, the prevalence was (50%) at 10 years old and (50%) at 12 years old. Based on gender, (100%) were male. Based on the type of amblyopia, (100%) was isotropic amblyopia. The prevalence of students with risk factors for amblyopia was (0.45%), with 1 student with isometropia.

Conclusions: The prevalence of amblyopia is 0.89% in SDIT Hafizh Cendekia Banda Aceh students, with the dominant occurrence in boys aged 10 and 12. The isometric type of amblyopia was found to be predominant. And isometropia is the dominant risk factor in amblyopia cases.

Keywords: Amblyopia, prevalence, early detection, school-age children

Selection of surgical interventions in pediatric hydrocephalus: a literature review

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Introduction: Hydrocephalus is a condition in which the flow of cerebrospinal fluid is disturbed due to an imbalance between production and reabsorption, or there are obstacles along its distribution channel. The most common surgical intervention and standard strategy for treating hydrocephalus in recent years have been the placement of a shunt, particularly a ventriculoperitoneal shunt (VP-Shunt). In addition to shunt placement, Endoscopic Third Ventriculostomy (ETV) and Choroid Plexus Coagulation (CPC) are currently being performed simultaneously, considering that the combination of the two procedures is sufficient to provide maximum results and can even reduce the risk of failure.

Method: This study uses the method of literature review or literature review. The method chosen is Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), by selecting the characteristics of literature through electronic media with database searches through the PubMed and Google Scholar sites. The inclusion criteria used were: patients diagnosed with hydrocephalus, both communicative and non-communicative with age < 18 years, surgical intervention with Vp-shunt, EVT with or without CPC and follow-up of at least 3 months.

Result: There were 1,251 samples included in the 10 articles in this study. There were 350 ETV sizes, 696 Vp-Shunts, 12 EVDs, 139 ommaya reservoirs, ETV/CPC 73, ETV/Shunt 1, Vp-shunt revision 45 and ETV/CPC revision 1. The etiology of hydrocephalus with the highest percentage of post-infectious hydrocephalus cases with an average age of intervention in this study was <6 months.

Conclusion: The choice of intervention in cases of hydrocephalus should be based on patient characteristics. Installation of a shunt, ETV or ETV/CPC may be the first choice based on the etiology of the hydrocephalus, the patient's age and risk assessment taking into account the complications that may arise from the selected procedure.

Keywords: Surgical interventions, pediatric hydrocephalus, literature review

Open surgical resection with modified dartevelle approach for neurofibroma clinically presenting Pancoast syndrome

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Introduction: Pancoast or superior sulcus tumor consists of various types of tumors invading the apical thorax and cause a characteristic syndrome called

“Pancoast-Tobias Syndrome,” most commonly caused by malignant tumors.¹⁻⁴ Benign cause of Pancoast's syndrome is rarely reported.

Case report: A-19-year-old woman presented a mass in the left neck with intermittent pain which radiated to the shoulder, chest and left arm for 2 years. The patient complained of numbness and weakness in the left hand. Neurological examination found the weakness of the left fingers' hand to flexion and extension. MRI of the cervical revealed a brachial plexus tumor. Open surgical resection was performed using a modified anterior transclavicular approach (modified Dartevelle approach).

Conclusion: Although rarely reported, benign tumors may cause Pancoast's syndrome. A modified Dartevelle approach may be used in a neurofibroma that presented Pancoast syndrome

Keywords: Pancoast syndrome, neurofibroma, modified Dartevelle approach

Efficacy of 1064nm neodymium:YAG laser and 2940nm fractional erbium laser for severe acne with acne scar: a case report

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Introduction: Pharmacological therapy is not always desirable because of the development of antibiotic resistance or the potential risk of adverse effects. Non-pharmacological therapies can be viable alternatives to conventional therapies. Laser therapy has been widely used in treating acne vulgaris due to its effectiveness and safety as it provides more rapid response with less rate of recurrence, specifically 1064 nm Nd:YAG laser. Few studies have investigated laser combinations. Combination of 1064 nm Nd:YAG and 2940 nm fractional erbium laser for severe acne with acne scar has not been reported.

Case report: We report a case of severe acne with acne scars in a 21-years-old female, skin type IV, treated using 1064 nm Nd:YAG laser five sessions and 2940 nm fractional erbium laser two sessions. Reduction of acne lesions counts and acne scars improvement prominent after Nd:YAG laser at least four sessions. Our patient's acne scars improved not significantly after the 2940 nm fractional erbium laser. Acne remission was sustained through the follow-up period. There are no post-inflammatory hyperpigmentation and no exacerbation of acne lesions after procedures.

Discussion: The efficacy of 1064 nm Nd:YAG laser for acne vulgaris and scars was proved. This laser eliminates Propionibacterium acnes bacteria, reduces sebaceous glands production, reduces erythema and pain, and creates new collagen. The low-energy erbium laser is safe and effective for treating acne scars, wrinkles and inflamed cystic acne. Still, the potential risk of worsening atrophic scars with overtreatment should be noted.

Conclusion: 1064 nm Nd:YAG laser is very effective for mild to severe acne and provides good improvement for new acne scars. While 2940 nm fractional erbium laser is more effective for mature scars.

Keywords: acne, scars, laser for treatment, 1064 nm Nd:YAG laser, 2940 nm fractional erbium laser.

Ileal atresia with intestinal malrotation: case report

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Background: Congenital intestinal obstruction occurs in approximately 1 in 2000 live births and is a common cause of admission to a neonatal surgical unit, accounting for up to one-third of all admissions. Morphologically, congenital defects related to continuity of the intestine can be divided into either atresia or stenosis. Together, they constitute one of the most common etiologies of neonatal intestinal obstruction.

Case presentation: We present a case of a 6 day old male baby referred to zainal abidin hospital due to vomit greenish since the age of 2 days accompanied by not defecating, performed a contrast enema to get a microcolon picture and performed Operative action found ileal atresia with intestinal malrotation, performed Ladd procedures and repair atresia, postoperative management of the patient in the NICU with monitoring OGT decompression, nutrition and definitive antibiotics

Conclusion: Congenital Intestinal obstruction need a compressive therapy in combination of surgical procedure and postoperative management

Keywords: Ileal atresia, Intertinal malrotation, Ladd procedure

A rare case of a locally-advanced neuroendocrine carcinoma of the breast following the modified radical mastectomy

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Background: Neuroendocrine differentiation has been demonstrated in up to 30% of invasive ductal carcinomas and is most frequently found in mucinous carcinomas, particularly the hypercellular variant, and solid papillary carcinomas. Neuroendocrine carcinoma of the breast (NEBC) is a rare case, less than 0.1% of all breast cancer or Less than 1% of all Neuroendocrine tumors (NET). Additionally, a diagnosis requires excluding other primary sites and the presence of histological evidence of a breast in situ component in the same tumor. Rarely do primary neuroendocrine breast cancers present with such extensive metastatic disease or locally progressed illness. We presented a case of locally-advanced neuroendocrine carcinoma of the breast at our institution. NEBCs usually run a more aggressive clinical course and tend to have a higher propensity for local and distant recurrence when compared to other types of invasive breast carcinoma

Case Description: A 48-year-old woman presented with the complaint of a wound that bleeds easily and gets bigger over the previous surgical wound. The patient had a history of breast lumps 1 year before hospital admission. The patient underwent a mastectomy at a private hospital with the histopathological diagnosis of a malignant tumor and was then referred to our institution. Still, the patient did not immediately seek medical treatment. Physical examination revealed a palpable mobile lump at 9 o'clock direction, 4 cm from the nipple, with a diameter of 5 cm. The patient underwent a core biopsy resulting from a neuroendocrine carcinoma of the breast. Currently, the patient is undergoing

chemotherapy, docetaxel, and carboplatin and is being evaluated regularly.

Conclusion: NEBC is a very rare breast malignancy with unclear histogenesis, which is associated with a more aggressive clinical course than other invasive breast cancer types. Due to the tumor's rarity, the optimal treatment has not been clearly defined and is currently treated similarly to conventional breast cancer. Surgery is the mainstay of treatment. The distinction between primary from metastatic neuroendocrine breast tumors is crucial as these two entities require different therapeutic approaches. Further research is needed to understand the tumor's molecular profile and identify novel targeted therapies. The neuroendocrine and breast in situ tumor characteristics must be considered simultaneously for the best possible treatment.

Keywords: Neuroendocrine carcinoma, breast, chemotherapy, modified radical mastectomy

Mini research, type 2 diabetes mellitus patients younger than 40 years in the Endocrine Polyclinic of dr. Zainoel Abidin Hospital

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Background: Type 2 DM is usually regarded as an old age disease since it occurs mostly in the elderly. Nevertheless, type 2 DM is now becoming more common among young people. Therefore, the present study aims to describe the phenotype of type 2 DM patients younger than 40 years in the endocrine polyclinic based on BMI, gender, and HbA1c.

Method: The population of this study included people with diabetes mellitus less than 40 years old who visited the Endocrine Polyclinic of dr. Zainoel Abidin Hospital, Banda Aceh in the period from June 2019 to April 2020. The sample was determined through a simple random sampling process with a total sample of 95 patients. The inclusion criteria were patients diagnosed with type 2 DM and below 40 years in the endocrine polyclinic of dr. Zainoel Abidin Hospital, Banda Aceh. While the exclusion criteria were typed 2 DM patients who did not have complete variable information. Data were obtained by accessing online medical record data on the medical record database of Endocrine Outpatient Poly of dr. Zainoel Abidin Hospital. And then analyzed descriptively in the form of data percentages, mean (average), standard deviation and categories and presented in tables and diagrams.

Results: The age percentage of patients with type 2 DM less than 40 years in the endocrine clinic is mostly in the range of 30-39 years old (96.8%), where the number of women with type 2 DM patients is more than men, specifically 58 patients (61%) and 37 patients (39%). HbA1C most often ranged from 6.5 to 8.0 and 10.1 to 11.0, approximately 22% of patients. The average body mass index of type 2 DM patients who frequently went to the polyclinic was IMT 25-29.9: 37 patients (38.9%)

Keywords: Type 2 DM, younger patients, endocrine

Extirpation of inverted papilloma with endoscopy approach: a case report

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Introduction: Inverted papilloma is a benign tumor that generally originates from the lateral wall of the nasal cavity and mostly grows in the middle meatus. Incidence This tumor is still rarely found in the ear, nose, throat, head and neck, which is around 0.5%-4% of all tumors of the nose and paranasal sinuses. The exact cause of inverted papilloma is unknown. Clinical symptoms of inverted papilloma are unilateral nasal obstruction, rhinorrhea, epistaxis, anosmia, tinnitus and other symptoms. Investigations that can be done are histopathological examination, CT Scan and MRI. Histopathology is the gold standard in the diagnosis of inverted papilloma. Management of inverted papilloma is carried out with a surgical approach, namely lateral rhinotomies, maxillectomy, degloving and non-invasive surgery through endoscopy.

Case Description: A 44 years old female patient has been reported with a diagnosis of inverted papilloma. The patient complained of nasal obstruction which had appeared since 2 years but in 6 months the obstruction was felt to be total and accompanied by rhinorrhea. A biopsy was done with the results of inverted papilloma, from the CT scan of the paranasal sinuses, it was found that the mass filled the right nasal cavity, right maxillary sinus and right ethmoid sinus. The patient was subjected to mass extraction via endoscopy.

Conclusion: Inverted papilloma is a benign tumor of the nose and paranasal sinuses, with biopsy being the gold standard examination, the main treatment is surgery.

Keywords: inverted papilloma, benign tumor, surgery.

Diabetes insipidus like syndrome in patient with spinal cord injury

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Introduction : Polyuria can be objectively defined as urine output in excess of 3–3.5 L per day with a low urine osmolality (<300 mmol/kg). Polyuria and polydipsia are not well recognized disorders in patients with spinal cord injury, but the physician should be aware of the methods of evaluating polyuric conditions and determine the precise diagnosis

Case Report : A female patient, 23 yo admitted to dr. Zainoel Abidin hospital Banda Aceh with excessive urinate that experience since February 2019, frequency around 10-15 times/day, excessive thirst due to frequent urinate with total amount of water consumed about 10 L/day, hiccups and excessive salivation. No complaint of pain at the throat or difficulties of swallowing. In late January 2019, patient undergo anterior stabilization with fusion surgery of cervical bone due to destruction in cervical 4-6. She had history of using narcotics,

alcohol and free sex, so the destruction of her cervical spine was though due to tuberculosis infection. No abnormalities found in the head, thorax, cardia, abdominal and extremities examination. We found post operation scar on her neck We only focused diagnostics for polyuria and polydipsia symptoms. The 24 hour urine collected and return a urine volume of 6000 ml. Plasma sodium 145 mmol/L; potassium 4,5 mmol/L; chlorida 109 mmol/L; random blood glucose 104 mg/dL, Urem 6 mg/dL, and Creatinin 0,58 mg/dL. Plasma osmolality was 296,78 mOsm/kg water. Urine density is 1,010; pH 6,0; protein (+); and glucose (-). We didn't perform urine osmolality and water deprivation test because our minimal resource setting and Anti Diuretic Hormone (ADH) because there were no disturbance in her brain.

Conclusion: The state of polydipsia and polyuria studied on 59 patients who had sustained injuries to the cervical portion was hypothesized due failure of regulatory neural impulses at cervical level to pass down past the point of injury from their point of origin in the neurons concerned in the regulation of water metabolism and responsible for a diabetes insipidus like syndrome. Oththeory is because in spinal cord injury there were selective disruption of posterior pituitary circulation due to fat globules, thrombi, and hypovolemia resulting in hypoxia and tissue necrosis, and that after spinal trauma, sympathetic tone become disturbed and caused vascular dilation that leads to hypotension. Both conditions may disturbed ADH production and secretion.

Keywords : Diabetes Insipidus, Spinal Cord Injury, Cervical Cord Injury

Characteristics of burned patients in Zainoel Abidin Hospital Banda Aceh period of August 2021 – August 2022

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Background: Burns is a complex trauma due to intensive heat contact, which directly hits the body, thus damaging human skin (thermal burns). Burns are a type of trauma with high morbidity and mortality, requiring special treatment from the early to the advanced stages. The mortality rate of burn patients worldwide can be around 195,000 per year. The aim of this study is to describe the characteristics of burn patients in the Plastic Surgery Division of the Regional General Hospital, dr. Zainoel Abidin Aceh Province in August 2021 – August 2022.

Methods: We retrospectively explored and included all patients diagnosed with uncomplicated burns. Meanwhile, patients with incomplete or damaged medical record data, which describes their identity and does not conclude the information needed in the study, have been excluded from the study.

Results: Most burn patients by gender were men aged 21-30 years old. Patients with burns are most recently educated in high school/equivalent. The work most occupied by burn patients in that period was homemakers. The most common degrees of burn were Ila and IIb.

Conclusion: Burns can occur in all circles of society, but several factors can be dominant characteristics among patients.

Keywords: characteristics, burn patients, aceh.

Comparison of patients undergoing surgery before and during the COVID-19 pandemic in Meuraxa Hospital, Banda Aceh

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Background: In late December 2019, an unknown pneumonia case was reported in Wuhan, Hubei Province. On March 2, 2020, 2 cases of COVID-19 were reported in Indonesia. Confirmed COVID-19 cases in Aceh Province as of February 9, 2022, totaled 38,668 cases, 36,383 recovered patients, and 2070 died. Based on the increasing number of COVID-19 cases, the authors need to look at the comparison of patients undergoing surgery before and during the COVID-19 pandemic.

Material and Methods: Cross sectional research, using a comparative approach to determine whether there is a significant comparison of the result of several characteristics of patients undergoing surgery before and during the COVID-19 pandemic based on secondary data recorded on medical records and analyzed using the SPSS program.

Results: The comparison of patients who underwent orthopedic surgery before and during COVID-19 pandemic for the age variable there was a significant difference ($p < 0.05$) while for gender and case variations there was no significance difference ($p > 0.05$). There is no significant difference in urological surgery for age and sex variables ($p > 0.05$) and for case variations there is a significant difference ($p < 0.05$), in general surgery for age there is a significant difference ($p < 0.05$) for gender and case variations there is no significant difference ($p > 0.05$)

Conclusion: In general, there is a significant difference in age distribution of those undergoing orthopedic surgery and general surgery before and during the COVID-19 pandemic. There is a significant difference in the variety of case undergoing urological surgery between before and during the COVID-19 pandemic

Keywords: COVID-19, pandemic, surgery, Meuraxa Hospital

Decreased cardiac parasympathetic function is associated with acute coronary syndrome severity

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Background: In acute coronary syndrome (ACS), there is an increase in sympathetic activity due to the inflammatory response triggered by myocardial ischemia. Increased sympathetic activity is associated with an increased incidence of mortality. Heart rate variability (HRV) is a tool for assessing the autonomic function of the heart, which indicates the amount of fluctuation in heart rate at an average heart rate that occurs due to continuous changes in the balance between parasympathetic and sympathetic which in turn causes sinus rhythm to fluctuate. From the available heart rate variability variables, the standard deviation of Normal R-R interval (SDNN) shows the total autonomic effect. The variable high frequency (HF) and the square root of the mean square differences of successive RR intervals (RMSSD) indicate the dominance of the

parasympathetic function, while the variable ratio of low frequency/high frequency (LF/HF) indicates the sympathetic function. ACS can be categorized into levels of unstable angina pectoris (UAP), Non-ST elevation Myocardial Infarction (NSTEMI) or ST elevation Myocardial Infarction (STEMI).

Methods: This cross-sectional study recruited ACS patients underwent treatment at the ICCU and the heart care unit of RSUDZA aged 20-60 years as subjects from August - September 2022, with consecutive sampling technique. HRV examination was carried out using 4 extremity leads, while sitting still for 5 minutes with Health Express machine, to assess SDNN, RMSSD, HF, and LF/HF parameters. Patients with arrhythmic disorders including atrial fibrillation were excluded from the subjects. Data analysis was performed using ANOVA test (if normally distributed) or Kruskal-Wallis test (if not normally distributed).

Results: Of the 15 subjects with ACS, 6 of them were diagnosed with UAP, 4 patients with a diagnosis of NSTEMI and 5 patients with a diagnosis of STEMI. The mean RMSSD value showed a significant difference between the UAP, NSTEMI and STEMI groups (24.1 vs 11.5 vs 15.7; $p = 0.037$). Another variable (HF) also showed a similar trend but not significantly different.

Conclusion: There was a significant difference in RMSSD (parasympathetic function) values between ACS subgroups, where ACS with myocardial infarction showed lower parasympathetic tone than ACS without myocardial infarction, indicating an association between decreased cardiac parasympathetic function and severity of acute coronary syndrome.

Keywords: Heart rate variability, HRV, Acute coronary syndrome, RMSSD, Cardiac autonomic function

Examination of gas chromatography-mass spectrometry (GCMS) and docking ligand of *Nigella sativa* as neuroplasticity and neuroprotection: a preliminary research

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Introduction: The aim of following paper is to present an examination of Gas Chromatography-Mass Spectrometry (GCMS) and docking ligand of *Nigella sativa* as neuroplasticity and neuroprotection. GCMS is a combination of Gas Chromatography instruments combined with a detector in the form of Mass Spectrometry. Ligand docking is a genetic-based method that can be used to find the most appropriate interaction pattern and involves two molecules, namely the receptor and the ligand. *Nigella sativa* is an annual aromatic plant, is a potential medicinal plant and has been used in many countries including India, Arab countries, and Europe not only as a spice and flavoring, but also as a medicinal ingredient.

Method: The method of this study was a preliminary research. This study aims to determine the various ingredients in *Nigella sativa* using the Gas

Chromatography-Mass Spectrometry examination method and its relation to the effects of neuroplasticity and brain neuroprotection.

Result: The results of the GCMS examination showed that *Nigella sativa* contained various compounds with Hexadecanoic acid (17.15%), Linoleic acid ethyl ester (15.0%), Octadecanoic acid (13.26%) as the 3 compounds with the largest percentage. In addition, several other compounds were obtained such as Methyl palmitate, Ethyl oleate, Ethyl laurate, Ethyl myristate, Methyl tetradecanoate.

Discussion: Efficacy of *Nigella sativa* 'can be an antioxidant, neuroprotector, anti-inflammatory, immunomodulatory and antitumor. Neuroplasticity or brain plasticity is defined as the brain's ability to make changes, remodeling, and reorganization aimed at adapting and developing better abilities to new situations. Neuroprotection is an action or therapy to prevent brain ischemia and is carried out before the ischemia occurs.

Conclusions: Compounds contained in *Nigella sativa* such as the thymoquinone group which is the active ingredient of *Nigella sativa* is useful in neuroprotection and brain neuroplasticity effects.

Keywords: GCMS, docking ligand, *Nigella sativa*, neuroplasticity, neuroprotection

Cardiac myxoma misdiagnose as infective endocarditis in a patient with acute limb ischemia and cardioembolic cerebral stroke: a case report

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Introduction: Fever, systemic embolism, and intra-cardiac masses are all symptoms of Infective Endocarditis (IE) and Cardiac Myxoma (CM). As a result, despite proper imaging studies, these diseases are frequently misdiagnosed one for the other.

Case description: A 23-year-old female patient was admitted to the emergency unit of Zainoel Abidin General Hospital with acute right lower extremity pain for the last few hours and presented roth spots of the retina. The next day after admission, she presented fever. The patient denied having chronic disease, drug abuse, and thrombotic history. Tooth decay was found. CT-Scan and Transthoracic Echocardiography (TTE) were obtained due to concern of infective endocarditis. CT-scan revealed cardioembolic cerebral stroke. TTE showed ejection fraction 56%, severe mitral regurgitation, and a mobile mass size 3.1x2.4 cm in mitral valve, attached to anterior mitral leaflet. The patient underwent thrombectomy, stroke therapy, dental tooth decay treatment, and lower limb rehabilitation before having Mitral Valve Replacement (MVR) surgery. On MVR surgery, we found a cardiac 50cc myxoma in anterior mitral leaflet rather than vegetation. A bioprosthetic valve was installed. The patient recovered quickly and she was able to discharge from hospital in the next 7 days after procedure.

Discussion: Although tooth decay is a risk factor for IE, CM and IE should be suspected if a patient with systemic embolism does have a cardiac mass. When operating on infective lesions, a portion of the specimen should be sent to histopathology in order to make a differential diagnosis. Intraoperative TEE confirmed that the mass was attached to the interatrial septum rather than the mitral valve, indicating that it was a myxoma. Even though infected CM is rare, it must be considered in order to differentiate IE if bacteremia were found.

Conclusion: In order to effectively manage the patients, it is crucial to distinguish between IE and cardiac myxoma. The mainstay of treatment for cardiac myxoma cases is surgery, which has an excellent prognosis. To evaluate for recurrence, long-term follow-up is frequently required.

Keywords: Infective endocarditis, cardiac myxoma, mitral valve replacement

Diagnostic modalities of patients with liver abscess: a case report

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Background: Liver abscess is defined as a collection of purulent material in the liver parenchyma which can be caused by bacterial, parasitic, fungal, or mixed infection. Liver abscess was seen in about 2.3 cases per 100,000 with higher rates found among men than women. Risk factors predisposing patients to liver abscess range from diabetes mellitus, cirrhosis, general immune-compromised state, use of proton pump inhibitor medications, gender, and age. The clinical presentation commonly includes fever, weight loss, and abdominal pain. Liver Abscess diagnosis is made by imaging studies, such as ultrasonography or CT-scan.

Case Description: A 25-year-old male patient came to emergency installation at Zainoel Abidin General Hospital with complaints of right upper abdominal pain since 2 weeks before entering the hospital. Pain is felt to disappear and appear, pain occurs especially when patient changes position and subsides when the patient lies down and there is a fever that has been felt for 2 weeks. Nausea, vomiting and weakness are complained by patient. Decreased appetite, the patient's weight decreased but the patient did not know how much weight loss was. Abdominal ultrasound examination showed a hypoechoic lesion measuring 12.7 X 11.9 cm in the liver's right lobe, suggesting a liver abscess. CT-scan examination showed a hypoechoic lesion in the liver's right lobe, suggesting a liver abscess.

Discussion: Pyogenic liver abscess is a serious and life-threatening condition with a high mortality rate that requires accurate diagnosis and therapy. In 60% of cases the liver abscess is localized in the right lobe of liver. The diagnosis of liver abscess is made based on the history, clinical picture, physical examination and chest X-ray, echocardiograph, ultrasound as an initial option that can be done and CT scan as confirmation for further support in the diagnosis of liver abscess. When a diagnosis of pyogenic liver abscess is suspected, there is a need to initiate broad-spectrum antibiotics immediately after collecting microbiological specimens.

Conclusion: Liver abscess is associated with a relatively high mortality rate and several serious complications. Because of the nonspecific symptoms and laboratory findings, the presence of predisposing factors can help increase diagnostic suspicion. Radiological features can help with both classifications of liver abscess and selection of the most appropriate treatment approach. Depending on its characteristics, liver abscess can be effectively treated by combination antibiotics. The key to successful outcomes with both approaches is early diagnosis and institution of appropriate therapy.

Keywords: liver abscess, amoebic liver abscess, pyogenic liver abscess.

Beta-thalassemia in pregnancy and its correlation to recurrent pregnancy loss (RPL): a case report

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Background: Thalassemia is an inherited disease as a common cause of microcytic anemia which arises from the absent synthesis or impaired synthesis of the globin protein component of hemoglobin, commonly seen in people of Mediterranean, Middle Eastern, and Asian descent.

Case Description: A 24-year-old Acehnese woman, Gravida 2 para 0 Abortus 1 at the 8th week + day 3 of gestation, was referred to the A&Es with a 2-day history of vaginal spotting and abdominal discomfort with the diagnosis of threatened abortion. She was a known case of transfusion-dependent Beta-Thalassemia Major with previous pregnancy loss. General examination revealed typical Chipmunk (Thalassaemic) facies, including depressed nasal bridge, prominent malar and parietal prominence, flat forehead and protruding jaw. She also has hepatosplenomegaly. Two days later she experienced inevitable abortion with severe vaginal bleeding and cramping. She underwent curettage to evacuate the conception. She eventually had two consecutive pregnancy losses.

Conclusion: Pregnancy in thalassemia major patients can be complicated with automatic miscarriages, fetal loss, preterm delivery, intra uterine growth retardation, and thrombosis. Oxidative stress due to iron overload and placental hypoxia caused by maternal anemia seem to provoke such complications including miscarriage.

Keywords: Thalassemia, recurrent pregnancy loss, miscarriage

Diagnosis and treatment of tolosa – hunt syndrome: a case report

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Introduction: Tolosa-Hunt syndrome is orbital or periorbital pain associated with ocular motor nerve paralysis. Tolosa-Hunt syndrome is a painful ophthalmoplegia due to nonspecific cavernous sinus inflammation. The existence of this syndrome has long been debated, and has been discussed. In 1954, Tolosa reported the first patient with left orbital pain, progressive ipsilateral loss of vision, total left ophthalmoplegia, and decreased sensation in the first division of the trigeminal nerve. This case report discusses the diagnosis and management of patients with Tolosa-Hunt Syndrome.

Case Description: A 61-year-old woman was brought by her family with severe headaches with NRS 7 for the past two weeks. The pain is felt to be throbbing, continuous and radiating to the eye area. The patient complained of both hard eyelids and could not be opened since two weeks before admission to the hospital. Neurological examination revealed paresis of nerves III and IV right. In this case, a CT scan and MRI can be performed to support the diagnosis.

Conclusion: The patient presented with severe headache and unilateral ophthalmoplegia. All three motor cranial nerves paresis and ptosis due to granulomatous inflammation of the cavernous sinus. Magnetic resonance imaging (MRI) may show cavernous sinus thickening. The cause of the inflammatory reaction is still unclear, but can be caused by trauma, tumors or aneurysms. Treatment of Tolosa-Hunt Syndrome using high doses of corticosteroids can improve symptoms quickly because corticosteroids have anti-inflammatory properties. Systemic steroid administration for 48 hours in Tolosa-Hunt syndrome significantly improves clinical symptoms, thereby ruling out other differential diagnoses.

Keywords: corticosteroids, headache, tolosa-hunt syndrome syndrome

Unipolar hip hemiarthroplasty in fracture neck femur with direct lateral approach: case report

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Introduction: Fracture of the femur is a common injury case reported by the emergency department. As the longest bone of the human organ, the femur is divided into several parts: head, neck, greater and lesser trochanter, trunk, and distal condyle. A femoral neck fracture is the most common injury found in older individuals with a mean age of > 50 years and can increase mortality and morbidity in sufferers. In its management, several methods can be chosen for the treatment of femoral neck fractures, including internal fixation, Hip Hemiarthroplasty (HHA) and Total Hip Arthroplasty (THA).

Case Description: A 90 years old woman was referred to hospital emergency room with chief complaints of pain in the upper right thigh and difficulty moving after falling in the bathroom about 1 week ago. The radiological examination showed a complete fracture and fully displaced neck of the femur with garden classification, and the patient was planned to undergo unipolar hip hemiarthroplasty with a direct lateral approach.

Conclusion: HHA is divided into two types, unipolar and bipolar. There is no significant difference between these two methods in terms of length of operation time, risk of blood loss, risk of dislocation, and postoperative complications. This patient's procedure was unipolar hip hemiarthroplasty with a direct lateral approach. DLA is the most often chosen technique besides the posterior, anterior, and lateral approaches.

Keywords: Unipolar hip hemiarthroplasty, fracture neck femur

Radiotherapy treatment for primary angiosarcoma of the breast: a case report

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Background: Primary breast angiosarcomas are very rare type malignant tumour of the breast. It may have an insidious clinical onset, presenting as a painless, often discrete palpable mass that grows rapidly. The median age of disease is 20-50 years old.

Case description: We report a case of a young woman with palpable and painless mass of her left breast. Based on radiological findings with mammography and MRI examination that reported as malignant mass of the left breast suspected angiosarcoma. Pathological confirmation post-surgery reported as well-differentiated angiosarcoma that arose primarily in the left breast. The patient treated with simple mastectomy followed by whole breast radiotherapy. External beam radiotherapy delivered using 3DCRT with FIF technique, prescribed dose 60 Gy in 30 fractions within 6 weeks.

Conclusion: There is no established standard treatment for primary angiosarcoma of the breast. Mastectomy remains the mainstay of treatment. Adjuvant radiotherapy appears to improve local control.

Keywords: Breast, angiosarcoma, adjuvant radiotherapy

Misdiagnosis of ectopic pregnancy in a patient with suspected colorectal malignancy: a case report

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Introduction: An ectopic or extra-uterine pregnancy is defined as the implantation of blastocyst anywhere other than the endometrial lining of the uterine cavity. However, one-third of women with ectopic pregnancies have no clinical signs, and 9% have no symptoms. The main symptom of an ectopic pregnancy is pain because of haemoperitoneum, especially if it has ruptured. So when an ectopic pregnancy ruptures it can cause symptoms of peritonitis and in many cases it can be misdiagnosed as some cases can present in the same way as peritoneal disease. Maternal mortality is estimated between 0.5-18%, and it can increase due to misdiagnosis.

Case: A 31-year-old female came to the Department of Digestive Surgery with complaints of pale and abdominal pain for five days. The mother denied being pregnant. On physical examination found muscular defans and tenderness. Based on all the investigation results, the patient was diagnosed with Suspected Rectal Carcinoma. After being hospitalized for a few days, they found out that she was pregnant. Then the patient was referred to the Department of Obstetrics and Gynecology. Based on ultrasound confirmation, the patient was diagnosed with Acute Abdomen ec Haemoperitoneum ec Suspected Tubal Rupture.

Conclusion: All women with the first day of the last menstrual period more than 45 days experiencing abdominal pain or vaginal bleeding should be suspected of having an ectopic pregnancy even if the patient denies pregnancy. Examining the uterus, uterine adnexa, and pelvic area is imperative during an ultrasound examination. If diagnosed and treated on time, fallopian tube rupture has a good prognosis for subsequent intrauterine pregnancy and a woman's survival.

Keywords: ectopic pregnancy, rectal carcinoma.

Immediate surgical treatment in neglected open left supracondylar humeral fracture: a case report

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Introduction: Supracondylar humeral fractures are the most common

paediatric elbow fractures. However, open supracondylar humeral fractures are rarely found in children. In developing countries, delayed treatment is common, and patients can present to hospital as neglected cases. This article aims to report immediate surgical treatment in neglected open supracondylar humeral fracture cases.

Case Description: A case of 16-year-old boy who suffered from neglected open left supracondylar humeral fracture was reported. He had history of traffic accident 10 days before admission, and was treated by traditional bone setter. He has already undergone surgery by debridement and followed by an open reduction with cross K-wire internal fixation, and external support post-operatively.

Conclusion: The fracture has already reduced and fixated well postoperatively. Immediate surgical treatment of neglected open supracondylar humeral fractures is recommended to achieve the best reduction of the fractures and prevent the infection.

Keywords: surgical treatment; neglected case, open fracture, supracondylar humeral

Aspiration pneumonia during caesarean section on HELLP syndrome patient: a case report

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Introduction: HELLP syndrome is a worsening of severe preeclampsia, which is characterized by hemolysis, elevated liver enzymes, and thrombocytopenia.

Case Description: We report a case of a 29-year-old woman in her first pregnancy 36-37 weeks gestation weeks with impending eclampsia and HELLP syndrome. In this patient, an emergency cesarean section was performed, intraoperative the patient experienced vomiting and oxygen desaturation SpO₂ reached 70%, patient was intubated and postoperative the patient was admitted to the ICU. The cause of desaturation was aspiration, which found a right lobar pneumonia on the chest X-ray.

Discussion: HELLP syndrome increases mortality and morbidity in patients with severe preeclampsia by 3.5 to 24.2%.

Conclusion: The importance of preventing preeclampsia from worsening must be accompanied by the quality of the patient's examination at ANC and making the right decision about the time of termination that greatly affects the final outcome for the safety of the mother and baby.

Keywords: Aspiration pneumonia, HELLP Syndrome

Cryptococcal meningoenephalitis management in intensive care unit of dr. Zainoel Abidin Hospital Banda Aceh-Indonesia: a case report

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Background: Fungal meningoenephalitis is a relatively rare infection that affects the central nervous system. Usually occurs in individuals with compromised immune systems. Several fungi can cause meningoenephalitis, including cryptococcal meningoenephalitis, also known as cryptococcosis. There are two variants of *Cryptococcus*, *Cryptococcus neoformans* and *Cryptococcus gattii*. Most of cases are caused by *C. gattii*, with infection occurring in immunosuppressed and immunocompetent individuals. Establishing the diagnosis by using CSF cult. The management of this case is using a higher fluconazole dose of 1200 mg.

Case Report: A 32-year-old female patient came with complaints of a persistent severe headache, intermittent nausea and vomiting, slurred speech, and decreased consciousness. Investigation of CSF's gram stain, KOH, and Chinese ink showed yeast and thick capsules. CSF culture showed growth of organisms in the form of *Cryptococcus neoformans* var. *gattii*. The patient was diagnosed with cryptococcal meningoenephalitis

Conclusion: High-dose fluconazole may be given to patients with cryptococcal meningoenephalitis, because access to amphotericin B deoxycholate and flucytosine is difficult. However, administration of high doses of fluconazole can increase the risk of toxicity, therefore, Isavuconazole can be considered because it has a better safety and tolerability profile

Keywords: Meningoenephalitis cryptococcus, fluconazole, intensive care unit.

Von langenbeck palatoplasty in submucous cleft palate patient: a case report

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Introduction: A submucous cleft palate consists of a notch in the posterior hard palate, diastasis of soft palate musculature in the midline (zona pellucida), and a bifid uvula. The estimated incidence of submucous cleft palate is at 1:1,250 to 1:6,000, occurring as an isolated anatomic deformity or as part of a syndrome. The majority of patients with a submucous cleft palate are asymptomatic, but some may experience velopharyngeal insufficiency. Treatment of cleft palate has evolved and aims to successfully close the cleft palate and improve optimal speech without compromising maxillofacial growth.

Case Description: This study reports a 1-year-old male patient with submucous palatal cleft. Local physical examination on facial region did not show cleft lip, intraoral regional did not show cleft alveolar and hard palate, however bifid uvula and pellucid zone were seen. Palatoplasty with von Langenbeck technique was planned in this patient. Despite being the oldest technique, von Langenbeck's palatoplasty is still used until today and a good option for wide and incomplete clefts because this technique facilitates dissection.

Conclusion: The Von Langenbeck technique is useful in management of the submucous cleft with one major addition. Studies have shown that simple von Langenbeck closure can give good results in cases with a long soft palate. A modified von Langenbeck palatoplasty can be incorporated in several cases where soft palate was sufficient length.

Keywords: submucous cleft palate, palatoplasty, von Langenbeck technique

Research on neurotrauma in Indonesia, where do we stand?

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Introduction: Traumatic brain injury (TBI) remains one of the most significant causes of mortality and disability worldwide. Southeast Asia region has the greatest overall burden of TBI compared to other regions globally. Fundamental knowledge about nervous system is essential to reduce the burden of this disease. Thus, research remains one of the most promising requirements to develop better treatment for TBI. This study aimed to systematically review TBI research in Indonesia, the most populous country in Southeast Asia.

Method: A literature searching was conducted on PubMed, Scopus, and Web of Science database using modified search terms "traumatic brain injury", "research", and "Indonesia" from 2000 to September 2022. Data extracted were year, type of study, academic background of the first author, journal Q status, and international collaboration.

Result: A sum of 62 studies was included in this review. Most of the studies (n=14; 22.5%) were systematic review and metanalysis, published In Q3 journals based on Scopus indexing (n=29; 46.77%, and written by academic with neurosurgery background (n=28; 45.2%). Most of the studies were published in 2021. There was a tendency of increase of publication numbers in 2021 compared to previous years. Only three randomized clinical trial (RCTs) were published by Indonesian authors, including one pilot study. International collaboration was only seen in 16.1% studies (n=10).

Conclusion: Even though there was a trend of increase of publication numbers year by year, there is an urgent need of meaningful clinical research about TBI in Indonesia. A comprehensive plan is needed to addressing challenges regarding academic productivity is needed.

Keywords: traumatic brain injury, research, indonesia.

Profile patients of mandible fractures in general hospital dr. Zainoel Abidin Banda Aceh, Indonesia 2018 – 2020

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Background: Mandibular fracture plays an important role in craniofacial trauma and accounts for 50% of facial fractures. Treatment of this injury is important to maintain the function of speech, swallowing, and mastication in order to function properly.

Research Objectives: To find out the profile of mandibular fracture patients at Zainoel Abidin General Hospital Banda Aceh during the period January 2018 to January 2020

Research Methods: This study was conducted descriptively with a retrospective approach using medical record data. Samples were taken by total sampling technique, ie all patients with mandibular fractures underwent surgery in the operating room of dr. Zainoel Abidin Banda Aceh during the period 1 January 2018 to 31 December 2020 who met the inclusion criteria.

Results: In this study, the patient profile based on gender was mostly male 122 patients (77.71%) and female patients 35 patients (22.29%). Based on age, the most aged 18-25 years, namely 46 patients (29.30%) and the least aged >65 years 1 patient (0.64%). The most common fractures based on location were the left mandibular body in 42 patients (26.75%). The most frequently performed action was ORIF as many as 16 patients (73.8%).

Conclusion: Most of the patients in this study were male with the most common age range being 18-25 years. The most common procedure performed is ORIF with the most fracture locations being found in the body of the mandible

Keywords: mandibular fracture, profile.

Arteriovenous malformations: a case report

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Introduction: Arteriovenous malformations are vascular anomalies that are congenital abnormalities, characterized by abnormal connections between arteries and veins (passing capillaries). These high-flow lesions can vary in size and location. Arterio-venous malformations (AVM) are relatively rare intracranial abnormalities but these lesions are becoming increasingly common. Generally, these lesions appear and are recognized after bleeding has occurred. Surgical intervention is the definitive treatment for arterio-venous malformations

Case Description: Mr. RU, 54 years old, came with the chief complaint of an injury to the left shoulder with swelling, and had previously been treated with a diagnosis of AVM in the left shoulder. Physical examination revealed that the left upper extremity was larger than the right. The brachial, radial and ulnar artery pulses are stronger on the left than on the right. Laboratory examination revealed leukocytes 13,100/ μ L. Radiological examination with CT Angiography revealed AVM in the posterior side of the left shoulder region. The patient underwent surgery by excision of the left shoulder AVM and closing the defect

Conclusion: Arterio-venous malformations (AVM) are high-flow lesions that directly connect arteries and veins. Management of AVM varies, with a conservative approach adopted for asymptomatic patients or with mild symptoms. Surgical excision should be performed in a systematic manner, involving steps to minimize the risk of uncontrolled intraoperative bleeding and postoperative complications.

Keywords: arteriovenous malformations, management, outcome.

Profile of Maxillofacial Trauma Patients at Regional General Hospital Dr. Zainoel Abidin 2021

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Introduction: This study aims to determine the profile of maxillofacial trauma patients in dr. Zainoel Abidin 2021.

Methods: This study used a descriptive method with retrospective data collection using secondary data sources in the form of medical records from January to December 2021. Inclusion criteria were maxillofacial trauma patients who had been diagnosed based on radiological investigations with complete medical record data.

Results: The study with a total sample of 363 people with the majority as much as 70% male and the majority in the age range 11-20 years (28.4%) with a profession as a student (42.1%). The most common etiology is due to traffic accidents (85.1%), wherein the majority there are multiple fractures (61.7%) with the most locations in the zygomaticomaxillary complex (ZMC) (34.4%), followed by fractures in the frontal area (24, 7%) and dentoalveolar (15.7%), with 73% of patients having multiple soft tissue injuries. The majority of patients did not experience obvious breathing problems (98.6%), cervical injury (99.4%), or intracranial hemorrhage (84.8%). Investigations in the form of a 3D Head CT Scan were performed in the majority of patients (88.4%) and operative therapy was performed in the majority of patients (94,

Conclusion: Maxillofacial trauma requiring hospitalization is not uncommon in our trauma center with the majority occurring at school age due to traffic accidents and involving multiple fracture sites. Further research and efforts need to be done in order to prevent and provide resources in handling cases of maxillofacial trauma.

Keywords: maxillofacial trauma, profile, complication.

Bowel Perforation Due to Peritoneal Shunt

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Introduction: Ventriculoperitoneal shunt (VPS) is a procedure that has been widely used in the treatment of hydrocephalus since Kausch proposed it in 1905. The risk during the procedure is low, but has many complications.

Case Description: A 2-month-old woman complained of shunt coming out of the anus since 1 week before registering. Initially the shunt can pass in and out of the anus, then in the last three days the shunt is getting longer and cannot be re-entered. The patient also complained of nausea and vomiting for the past 3 days. Fever denied, seizure denied. The patient underwent

ventriculoperitoneal (VP) shunt insertion and meningocele repair at 2 days of age. Physical examination showed the child was weak. There appears a shunt protruding from the anus, but the patient did not find bloating and abdominal pain. After discussion with the surgical and pediatric surgical team, the patient decided to have a ventricular and peritoneal shunt removed. Intraoperative found shunt entry through the sigmoid colon to the anus. Then the cerebro spinal fluid (CSF) looks cloudy whitish, with the impression of pus. The results of CSF culture showed the presence of metillin resistance MRSA and Morganella bacteria, those sensitive to vancomycin and 3rd generation cephalosporins. Three days later the patient was scheduled to be performed extra ventricular drainage Followed daily CSF irrigation with vancomycin antibiotics for 3 days. After that the patient is rescheduled for the next VP shunt.

Conclusion: VP shunt has a few risks during the procedure and many complications afterward. History of myelomeningocele is one of the risk factors for intestinal perforation due to VP shunt. Symptoms of intestinal perforation due to VP shunt are not significant. The key to reducing morbidity and mortality are diagnosis, and management of VP shunt.

Keywords: Ventriculoperitoneal shunt, intestinal perforation, management

Profile of Neurosurgery Patients at Dr. Zainoel Abidin General Hospital Banda Aceh in 2020

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Background: The brain regulates the relationship between humans and the surrounding environment. Direct damage to the brain or disturbance of balance in the skull was commonly caused by head trauma, whether mild, moderate or severe head trauma. This study aims to determine the profile of neurosurgical patients at Zainoel Abidin General Hospital Banda Aceh during 2020.

Method: A retrospective review using medical records of all patients with neurological disease who require elective surgery at the Zainoel Abidin General Hospital.

Results: A total of 210 samples in this study. Elective surgery due neurological disease more frequently in men (117; 55.71%) with the most common age groups being less than 18 years and in the range of 36 to 45 years (43 patients; 20.48%). The mean age of the patients was 38.52 ± 18.63 years. The most common diagnosis intracranial tumor (52; 24.76%), followed by hydrocephalus (37; 17.62%). The most common surgical operation was craniotomy (80 patients; 38.1%), followed by cranioplasty (41; 19.52%). The lowest age at craniotomy was 6 years due to arachnoid cyst and medulloblastoma. The lowest age for a VP shunt was 4 days due to spina bifida rupture and hydrocephalus, while the highest age was 71 years due to non-communicating hydrocephalus.

Conclusion: Based on this study, elective surgery due neurological disease was dominated by male patients with the most common age being 18 years and ranging from 36 to 45 years. The most common surgical operation was craniotomy; the most common diagnosis was intracranial tumor.

Keywords: Neurosurgery, craniotomy, VP shunt

Knowledge level of chronic kidney disease patients in maintaining arteriovenous shunt function at Dr. Zainoel Abidin General Hospital Banda Aceh, Indonesia

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Introduction: Kidney disease has been a disease experienced by humans since ancient times. Interest in the medical field for the detection and treatment of kidney disease can be traced back to ancient times, but efforts are still fragmented and almost entirely focused on the manifestation of the disease's symptoms. However, kidney disease has recently been documented as a global public health problem.

Methods: This study is a descriptive study with a retrospective approach. Researchers conducted interviews with patients using questionnaires, the data collected were social demographics, medical characteristics, knowledge and attitudes of patient towards arteriovenous fistula (AVF).

Results: This research was conducted from July 1, 2021, to July 31, 2021 at the Hemodialysis Installation of RSUDZA Banda Aceh. From the results of the study obtained respondents as many as 80 respondents. The distribution of respondent characteristics shows that most of the respondents have an average age of SD 50.39 ± 12.594. According to gender, the largest number of respondents were male respondents, namely 48 respondents (60.0%), while female respondents were 32 (40.0%). After being interviewed, 71 respondents' families (88.8%) received training on AV Shunt treatment from a doctor. However, there were 9 respondent families (11.2%) who did not receive training.

Conclusion: Overall, the patient knows the rules of AV shunt treatment, but still needs to be evaluated to maintain good AV shunt function.

Keywords: AV Shunt, Chronic Kidney Disease, Knowledge, Zainoel Abidin Hospital.

Case Report: Chronic Subdural Hematoma

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Introduction: Chronic subdural hematoma (SDH) is an accumulation of blood between the dura mater that occurs more than 14 days after trauma. Chronic SDH most often occurs at the age of 50-70 years. In this case, chronic SDH was diagnosed by means of a CT scan. The annual incidence of chronic subdural hematoma has been reported as 1 – 5.3 cases per 100,000 population. Conservative management of patients with minimal neurologic deficits and minimal volume of chronic SDH may include burr holes and craniotomy. A study found that 78% of patients with chronic subdural bleeding who underwent surgery (burr-hole evacuation) had a good prognosis and achieved complete healing.

Case Description: A 67-year-old woman came with complaints of decreased consciousness since 1 day ago with GCS 9. Previously, the patient complained

of headaches and weakness in one of her limbs. The patient had a history of falling in the bathroom with his head hitting the floor 3 weeks ago. From the results of the CT-Scan examination, a hypodense image was obtained in the right frontoparietal region. In these patients, burr hole drainage is performed to reduce fluids such as blood that can suppress brain tissue.

Conclusion: We report a case of chronic subdural hematoma based on clinical manifestations and CT-Scan images. A hypodense image was found in the right frontoparietal area on CT-Scan examination. After the diagnosis was established, burr holes drainage was performed on the patient

Keywords: chronic subdural hematoma, therapy.

Case report: embolization selective at renal pseudoaneurysm with severe hematuria post open nephrolithotomy

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Introduction: Renal artery pseudoaneurysm is a rare renal vascular disorder that can occur as a complication after percutaneous nephrolithotomy causing hematuria. Noninvasive diagnostic modalities, particularly CT angiography, should be indicated at the initial examination. Selective trans-arterial embolization is a minimally invasive, safe, and efficient procedure in the management of post-nephrolithotomy arterial bleeding.

Case Description: A 43-year-old male patient came with a complaint of bloody stool after a nephrolithotomy operation. The patient experienced back pain, so the walk had to be bent. The patient has a history of kidney stones since 5 years and when the bladder feels stone comes out. bent over. From the results of ultrasound examination, it was found that the lesion was hyperechoic with an acoustic shadow of 1.3 cm. The patient was diagnosed with renal pseudoaneurysm with hematuria, selective embolization was performed on the patient.

Conclusion: This case reports a 43-year-old man with a diagnosis of renal pseudoaneurysm with hematuria. Selective embolization was performed on the patient as a minimally invasive procedure in managing arterial bleeding.

Keywords: pseudoaneurysm renal, embolization selective

Patient characteristic of head pancreatic cancer in Dr. Zainoel Abidin General Hospital Banda Aceh, Indonesia 2019 – 2021

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Introduction: Cancer affects various organs, including pancreas. Many patients are diagnosed with metastasis. Data on the characteristics of pancreatic cancer at Dr. Zainoel Abidin Hospital Banda Aceh hasn't been available. This study

aimed to determine the characteristics of patients with pancreatic cancer in In-patient installation at Dr. Zainoel Abidin Hospital Banda Aceh in 2019–2021.

Methods: This study is a descriptive survey research. Patients with pancreatic cancer in In-patient installation at Dr. Zainoel Abidin Hospital Banda Aceh in 2019–2021. Amounted to 34 people. Data were collected from medical records of all patients with pancreatic cancer.

Results: From this study, 9% of pancreatic cancer patients aged 25–34 years old, 9% aged 35–44 years old, 25% aged 45–54 years old, 35% aged 55–64 years old, 15% aged 65–74 years old, 3% aged 75–84 years old. The majority (55.8%) patients were male and 44.2% were female. Patients with higher levels of total bilirubin than normal is 79%, and 21% had more direct bilirubin than normal. About 79% had AST and ALT more than normal, 59% had albumin less than normal.

Conclusion: Pancreatic cancer patients are mostly 55–64 years old, and the majority are male. The most common clinical manifestations is abdominal pain. Most of the laboratory results of patients are out of normal range.

Keywords: characteristic, pancreatic cancer, patients.

Characteristics description of Hirschsprung's disease patients in Dr. Zainoel Abidin General Hospital Banda Aceh, Indonesia

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Introduction: Hirschsprung's disease is the most common cause of intestinal obstruction in neonates. Data on the characteristics of Hirschsprung's disease in Aceh are still scant. This study looks at the characteristics of Hirschsprung's disease in Zainoel Abidin Hospital.

Methods: Descriptive research was conducted from January 2017 to December 31, 2020. This research data is secondary data taken from medical record data at the Medical Record Installation and Surgical Polyclinic of Zainoel Abidin Hospital Banda Aceh, recording is done based on data variables. Univariate analysis was used to describe the characteristics of each variable. The data obtained from the patient's medical record are interpreted in the form of a frequency distribution table.

Results: This study involved 210 patients. Patients with Hirschsprung's disease were mostly found to be male (61.9%), age range 1–12 months (41.0%), originating from Aceh Besar (27.6%), and body weight range from 6.0–12.0 kg with a total of 93 people (44.3%).

Conclusion: Patients with Hirschsprung's disease are predominantly male, age range less than one year, from Aceh Besar, and weight between 6–12 Kg.

Keywords: age, body weight, district, gender, hirschsprung's disease

Multidrug-resistant tuberculosis with chronic kidney disease principles of management: a case report

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Introduction: End-stage renal disease (ESRD) complicates therapy in MDR TB. Instead of short-term therapy, long-term oral guideline with periodic evaluation of renal function and drug side effects was used.

Case Description: A 49-year-old male patient diagnosed with MDR TB and ESRD. In accordance with DST result a combination of Bedaquiline, Moxifloxacin, Clofazimine, Ethionamide, and Delamanid was planned to be consumed for 16 months after culture conversion. The baseline serum creatinine levels is 5.9 mg/dL. The baseline QTc interval was 345–401. Patient was given Bedaquilin 400 mg for 2 weeks and 200 mg 3 times a week for 22 weeks without interruption, Moxifloxacin 400 mg per day, Clofazimine 100 mg per day, Delamanid 100 mg twice a day and Ethionamide 750 mg. AFB conversion and culture obtained after 3 months of treatment. Clinical and radiological improvement was reported. There was no worsening in renal function and QT-complex (QTc) prolongation during treatment. The patient is treated with Moxifloxacin, Clofazimine and Ethionamide as for continuation phase of therapy, so the treatment lasts at least 18 months in total.

Conclusion: MDR TB in ESRD treatment is a challenge for clinicians to choose an effective drug guideline with minimal side effects. Guideline therapy for Bedaquilin, Delamanid, Clofazimine, Fluoroquinolones (especially Moxifloxacin) is a concern because of the high risk of QTc prolongation and other cardiovascular effect. Even though this therapy guideline is proven effective and safe, in more severe cases, QTC monitoring is necessary.

Keywords: TB MDR, end-stage renal disease, bedaquilin, delamanid, clofazimine, moxifloxacin

Giant pulmonary bullae with spontaneous pneumothorax

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Introduction: Giant pulmonary bullae (GPB) is an abnormal collection of air in the lung parenchyma with a lesion that occupies more than one third of the hemithorax and compresses the surrounding normal lung parenchyma. GPB will cause damage to the respiratory function with clinical complaints of shortness of breath and chest pain. One of the treatment options for GPB is bullectomy to prevent complications such as pneumothorax.

Case Description: A 51-year-old man complained of shortness of breath and chest pain after falling and hitting his chest on the floor. The patient is a smoker. Physical examination of the lungs revealed hyperresonant percussion and disappearance of vesicular sound. Chest X-ray revealed large avascular radiolucent areas in the right and left lungs. The patient was diagnosed with a spontaneous pneumothorax, so chest tube drainage was placed in the right

and left hemithorax. The chest CT scan revealed multiple large bullae. The patient underwent bullectomy surgery to prevent the main complication that is pneumothorax. The patient was treated for 3 weeks, showed clinical improvement, and discharged without complications. At monthly follow-up, the patient did not experience shortness of breath, chest pain, or recurrent pneumothorax.

Conclusion: Spontaneous pneumothorax can be caused by GPB. Clinical manifestations appear because the GPB compresses the surrounding lung parenchyma. One of the most common causes of pneumothorax in GPB patients is chest trauma. Bullectomy surgery is considered an important treatment to prevent recurrent pneumothorax complications. Bullectomy is safe and effective treatment options for GPB.

Keywords: giant pulmonary bullae, spontaneous pneumothorax, bullectomy.

Malunion correction on supracondylar humerus (gunstock deformity) fracture with lateral closing wedge osteotomy and plate fixation : a case report

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Introduction: Fracture of the distal humerus is defined as a fracture involving the distal aspect of the humerus that is parallel to or below the metaphyseal/diaphyseal level and can occur in extra-articular or intra-articular at the distal humerus, this fracture is common in children where the bone is still immature. Malunion is the most common complication of distal humerus fractures, especially displaced supracondylar humerus fractures. Malunion can occur because the fracture is treated non-operatively or closed, malunion can be corrected surgically or not depending on the patient's own expectations.

Case Description: A 10-year-old boy came with his parents to the orthopedic and traumatology outpatient clinic at Datu Beru Takengon Hospital, Aceh with complaints of a crooked left hand, this had been happening for about 3 months, the previous patient with a history of falling while playing in school about 3 months ago, at that time the patient was not immediately taken by his parents to the hospital but was taken to a shaman for fractures, at this time the patient also complains of limitations in bending his left hand. Physical examination found a deformity in the elbow joint of the left hand with a carrying angle of -200, the maximum flexion is only 900 different from the right hand which can be flexed up to a maximum of 1500. Next, the patient underwent an X-ray examination which showed a shift of the distal radius towards the posterior due to fracture. and has reached the stage of radiographic consolidation, then with the consent of the parents and the patient, the operation was performed with lateral closing wedge osteotomy and open reduction internal fixation (ORIF). After the operation is completed, analgesics and antibiotics are also given, the prognosis of this patient is likely good, depending on the patient's activities and the rehabilitation process.

Conclusion: Supracondylar fractures often occur in boys aged 5-10 years where malunion (gunstock deformity) can occur due to improper fracture handling resulting in decreased function of the extremities, surgical procedure is the choice in the treatment of malunion.

Keywords: distal humerus fracture, gunstock deformity, malunion.

Case report: goiter

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Introduction: Goiter is enlargement of the thyroid gland. Nontoxic Goiter is an enlargement of the thyroid gland with no disturbance of thyroid function. The cause of this gland enlargement is not due to inflammation or due to a tumor. The thyroid gland produces thyroid hormones (thyroxin/T4 and Triiodotyronin/T3), affecting the pituitary gland to produce thyrotropic hormone (TSH). With a decrease in thyroid hormone in the body, one example of which is iodine deficiency, TSH will increase and will cause increased hyperplasia of the thyroid follicle which will cause the thyroid gland to enlarge.

Case Description: Reported female patient aged 58 years with goiter cyst. The CT scan showed a solid cystic mass with calcification in the right thyroid and nodules in the left. Anatomical pathology results obtained Cystic goiter with acute inflammation and bleeding. Total thyroidectomy and radical neck dissection have been done

Conclusion: We report cases of goiter based on CT scan and anatomic pathology. After the diagnosis was made, thyroidectomy and radical neck dissection were performed

Keywords: goiter, governance, outcome.

Study on clinical and demographic characteristics of orthopedic cases in a single centre experience: a descriptive cross-sectional study

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Introduction: Orthopedic case comprise cases with fractures, soft tissue injuries, and deformities to congenital bone and joint problems. The statistics of orthopedic cases in the hospital have rapidly risen as the population, predominantly geriatric group, rises, and many challenges must be faced. Therefore, a study on the clinico-demographic pattern of orthopedic cases is necessary as it assists in identifying areas for primary prevention.

Methods: A descriptive cross-sectional study was done in Rumah Sakit TK II Putri Hijau Kesdam I/BB from September 2021-2022. The data from the medical record section was retrospectively collected. The convenience sampling technique was used, and descriptive statistical analysis was done.

Results: 102 cases were included in the study. Most cases were male for 72 patients (70.6%) and female for 30 (29.4%). The age of 20-29 became the most frequent category for 21 patients (20.6%), with 50-59 years old with 20 patients (19.6%). Both right and left clavicle fracture has become the most frequent presenting case, with 13 cases (12.74%) proceeding with femoris fracture for 4 cases (3.9%).

Conclusion: Orthopedic cases comprise primarily young adults, and the cases presented in male patients are more frequent. Clavicle and femoris fractures from the hospital's central pattern of musculoskeletal conditions. Further study

is required with a larger sample size and probability sampling method for better scientific findings.

Keywords: clinical characteristics, demographics, orthopedic cases, descriptive study.

Profile of Fournier gangrene patients in Dr. Zainoel Abidin General Hospital during 2020 – 2021

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Introduction: Fournier's gangrene is a urological emergency with a high mortality rate. In 1764 Bauriene reported gangrene of the scrotum in a 45-year-old man due to traumatic injury to the genital region and left thigh from a buffalo horn which was treated with surgical debridement. Fournier gangrene was used to define a more widespread and rapidly progressive condition of necrotizing fasciitis infection in the perineal, perianal and genital regions.

Methods: This type of research uses a descriptive method with retrospective data collection using secondary data sources, namely medical records and meets the inclusion and exclusion criteria of the study. This study was to determine the characteristics of Fournier gangrene patients in RSUDZA from 2020 to 2021.

Results: Dr. Zainoel Abidin General Hospital Banda Aceh from 2020 to 2021 are all male (100%), then based on age the most experiencing Fournier gangrene are 46-65 years (60%), the majority are from East Aceh Regency (20%), educated the last one was junior high school (40%), worked as a laborer (28%). In addition, 44% of patients had hypertension and all patients had diabetes mellitus (100%) with 56% having experienced DM for 5 years and 44% having experienced it for >5 years.

Conclusion: Fournier gangrene patients aged 46-65 years old at most and All patients are male. All patients with Fournier's gangrene had diabetes mellitus and 44% had hypertension

Keywords: Fournier Gangrene, Characteristics, Urology

Salivary gland anlage tumor in young adult: a rare case report

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Introduction: Salivary gland anlage tumor is an extremely rare congenital tumor which usually presents in neonatal period with male predilection. The site of this tumor is commonly near midline in the nasopharynx or posterior nasal septum, in a few cases it could be found specifically in nasal cavity, pharynx, posterior pharyngeal wall, and oropharynx.

Case Description: We present a case of 26-year-old woman with unusual mass at left nasal septum with smooth surface, white greyish color with firm

consistency. From histological examination we found a specific findings of salivary gland, which is found in salivary gland anlage tumor based on the mass location. We diagnose this patient with this rare type of tumor, thus encourage us to do literature review about this patient and case.

Conclusion: We diagnose this patient with this rare type of tumor, thus encourage us to do literature review about this patient and case.

Keywords: Salivary gland anlage tumor, SGAT, nasopharynx tumor

Diagnosis and management of tubal abortus: a case report

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Introduction: An ectopic pregnancy is a pregnancy in which the fertilized egg implants and grows outside the endometrial cavity of the uterus. An ectopic pregnancy can abort or rupture the tube wall; this event is referred to as a disturbed ectopic pregnancy.

Case: A 24-year-old woman was referred to Dr. Zainoel Abidin General Hospital, Banda Aceh, Indonesia with complaints of abdominal pain and she looked pale. The patient then underwent an ultrasound examination and was diagnosed with Abdominal Pain with VAS (3-4) ec susp. disturbed ectopic pregnancy on G1P0 6-7 weeks pregnant. Mother with microcytic hypochromic anemia (Hb 7.9). She underwent exploratory laparotomy to find out the exact cause of the patient's condition.

Conclusion: She underwent an exploratory laparotomy to determine the exact cause of the patient's condition. An ultrasound examination may be performed to confirm the diagnosis.

Keywords: ectopic pregnancy, disturbed tubal pregnancy, laparotomy, transvaginal ultrasound.

Successful diagnostic and management of placenta accreta in the 2nd trimester of pregnancy: a case report

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Background: Massive obstetric bleeding is currently mostly due to placenta accreta. straight. The incidence of the placenta increased with co-discovery from 24% after one cesarean section to 67% after four or more cesarean sections.

Case description: Mrs. S 41 years old, G5P3A1 18-19 weeks pregnant. Single live intrauterine fetus, HAP with grade III hypovolemic shock, 3 times BSC, with PPT accreta with massive bleeding that occurs suddenly while the mother is sleeping. From the results of laboratory examinations Hemoglobin 7.6 g/dl, hematocrit 23%, MCV/MCH/MCHC with a Normocytic Normochrome with an impression of bleeding from the results of Transvaginal ultrasound examination

from the Fetomaternal division showed fetal heart rate (+), estimated fetal weight 221 grams, anterior corpus placenta covered the entire OUI. From the ultrasound examination results, it was also found that myometrium thickness was 1 mm, lacuna grade 3, positive bridging vessel, clear zone (-), with a PAI score of 8, i.e. 96% was placenta accreta.

Conclusion: The increase in the incidence of placenta accreta continues to occur every year along with the increasing number of cesarean sections. Worldwide, this increase is reported worldwide in direct proportion to the increase in the incidence of cesarean section, with a fairly high mortality rate. Accurate diagnostic and treatment will play a role in reducing morbidity and mortality rates for mothers and babies.

Keywords: placenta accreta, pregnancy, diagnostic, management.

A patient with ovarian cancer and cervical cancer (double primary cancer): a case report

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Introduction: Multiple primary cancer is a condition in which more than one primary tumor occurs at the same time in one or more organs in one patient. The etiology of multiple primary cancer of the female genital system is not fully understood.

Case description: A 55-year-old woman had prolonged menstruation and bleeding, the menstrual blood of the patient was very much, she changed 5-6 times sanitary napkins in a day. She complained that from 5 months ago. The patient also showed an increasingly enlarged and hard abdomen. The pain was denied, from ultrasound examination, it was found that the uterus was anteverted with a size of 5.23x4.75x2.87 cm, ovaries were difficult to assess, the appearance of a hypohyperechoic with a size of 15.09x13.64x11.29 cm with solid parts and presence of free fluid, The impression of a solid ovarian neoplasm was suspected. From the pathological examination, it was found that squamous cell carcinoma on the cervix and cystadenocarcinoma mucinous ovarii on the right and left ovaries, then patient had a double primary malignancy in the uterus and ovaries.

Conclusion: The incidence of double primary malignancy has been found in several cases. The presence of dysplastic changes at the second primary site strongly indicates the presence of a new primary. Appropriate and prompt examination and management should be done in this case.

Keywords: cervical cancer, dysplastic, ovarian cancer, double primary cancer.

Acute fatty liver of pregnancy: a case report

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Background: Acute fatty liver of pregnancy (AFLP) is a serious condition and life-threatening complication for the mother. This case report discusses the diagnosis and treatment of a 22-year-old lady with Acute fatty liver of pregnancy.

Case description: A 22-year-old woman comes with regular contractions. Since 1 month ago, the patient has experienced yellow, especially in the eye. The patient does not complain of pain in the upper right. History of leucorrhoea is denied, and yellow urine. Her symptoms of nausea and vomiting more than 5 times a day. Laboratory tests found an elevation in liver function. This condition is caused by mitochondrial dysfunction. Patients diagnosed with AFLP generally have a gestational age of 28-40 weeks.

Conclusion: Clinical symptoms vary from mild to severe and are associated with other third-trimester symptoms, making it difficult to diagnose early. Early diagnosis, rapid delivery, and intensive support services are the basis of AFLP management. Childbirth is the next step if the mother is stable.

Keywords: Acute fatty liver of pregnancy, elevated in liver function, neonatal outcome

Embolic-type ischemic stroke with bleeding transformation in young adults: a case report

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Background: Stroke is an emergency that occurs in the field of neurology. Stroke can cause death and disability. Hemorrhagic transformation can be identified in 3-40% of patients with ischemic stroke. This transformation is estimated to occur in 5% of uncomplicated strokes, and in the setting without fibrinolytic therapy.

Case illustration: A man aged 40 years with weakness of the right limb since ± 5 days before admission suddenly at rest. The patient initially complained of headache of moderate intensity which subsided with rest. Vomiting and convulsions were not complained. Mouth drooping and speaking sluggishly were denied. The patient cannot speak and does not understand what other people are talking about and cannot follow orders since ± 4 days prior to admission. Neurological examination, of the cranial nerves revealed paresis of the right VII dextra central nerve. On examination of motor strength, weakness of the right limb was found. Physiological reflexes increased +3 on the right extremity, pathological Babinski reflex was found on the right extremity. On CT-Scan the head shows the impression of a cerebral infarction with hemorrhagic transformation and cerebral edema.

Conclusion: A 40-year-old man has been reported with weakness of the right limb since ± 5 days prior to admission. Based on history, physical examination, and CT scan, the patient had an embolic type of ischemic stroke with hemorrhagic transformation. The radiographic features of a transforming stroke may include petechiae and hematoma.

Keywords: embolic stroke, bleeding transformation, management.

Autologous blood transfusion in open fracture communitive tibia 1/3 medial sinistra: a case report

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Background: Improvements in medical technology and the gap between blood supply and demand have made Autologous Blood Transfusion (ABT) a concern in recent years. ABT is a technique of taking blood from one patient and re-transfusion back to the same patient when needed. The use of ABT can reduce the risk of transmission of infection. In recent years, there have been several ABT options, one of which is preoperative autologous blood donation (PABD). PABD refers to a technique in which the patient's own blood is collected and stored for a certain period of time before surgery.

Case Report: A 33-year-old man came to the Emergency Room (IGD) with complaints of not being able to move his left leg after falling from a motorcycle, a history of decreased consciousness, nausea and vomiting was denied. The patient had an open wound on his left leg, and an Open Reduction External Fixation (OREF) was performed. The results of laboratory tests after the OREF procedure showed Hb: 9.3 g/dl with blood group AB rhesus negative. The patient was then performed ABT in preparation for the surgery to close the defect.

Discussion: PABD can stimulate the proliferation of bone marrow cells, stimulate erythrocyte regeneration, improve hematopoietic function in postoperative patients so as to speed up recovery after surgery, and reduce the possibility of infection caused by immune reactions from allogeneic blood transfusion. Recent studies have shown that combination therapy of erythropoietin and iron can increase hematopoiesis quickly, thereby increasing hemoglobin levels in patients, reducing the number of blood transfusions and contributing to patient recovery.

Conclusion: ABT can reduce the risk of disease transmission and is an option in patients who have rare blood types

Keywords: autologous blood transfusion, preoperative autologous blood donation, comminuted open fracture of the tibia.

The effect of heart rehabilitation on body fat and functional capacity in post rheumatic mitral valve replacement patients: a case report

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Background: Rheumatic heart disease (RHD) is a disease that becomes a major burden on health, especially in developing countries that significantly impact morbidity and mortality. The mitral valve is the most commonly affected valve where valve stenosis occurs. Patients who undergo heart valve surgery usually

come with impaired physical activity and physical capacity that has occurred for several years. Cardiac rehabilitation (RJ) is a long-term integrated program that involves education, counseling and training to improve the physical, mental and social conditions of patients with cardiovascular disease including RHD.

Case Description: We report a 26-year-old man with a chief complaint of shortness of breath since childhood that worsened 10 years prior to hospital admission. Trans-esophageal echocardiography showed severe mitral stenosis, mild aortic regurgitation, moderate tricuspid regurgitation ec RHD. Surgery was performed in June 2022 with a mitral valve replacement using a mechanical valve and a tricuspid valve repair. Phase I cardiac rehabilitation began a few days before the operation in the ward dr. Zainoel Abidin with educational programs about patients' illnesses, breathing exercises, and effective coughing exercises. The polyclinic of RSUD dr carried out Phase II RJ. Zainoel Abidin with a measured exercise program. After completion of CPR phase II, there was an increase in functional capacity which was indicated by an increase in the 6minute walk test (6MWT) (378 m to 495 m) and body fat in patients which was characterized by an increase in total body fat (26.3% to 30.5%).

Conclusion: CR should be part of the treatment plan for patients undergoing heart valve surgery, Cardiac rehabilitation plays an important role in the management of patients post mitral valve replacement and tricuspid repair.

Keywords: rheumatic heart disease, mitral valve replacement, body fat, functional capacity.

Condyloma acuminata in pregnancy: a case report

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Introduction: Condyloma acuminata, known as genital wart is benign-type tumor affecting external anogenital area in general. It manifests human papillomavirus (HPV) infection, strains 6 and 11. The diagnosis is clinically made through integral approach of history taking and physical examination. It is histologically found as fibroepithelioma. Pregnancy has created the warts proliferate faster due to immunity changes and increasing vascularization. Well-conducted diagnosis for active and laten cases and prompt management reduce the lesion and minimize the recurrence.

Case description: 33-years old woman complaining lumps in vagina area and has been getting worse since a month before admitted to the hospital. Due the lumps, patients' daily activity is disturbed due to pain. The patient is 25 weeks pregnant at the time. History taking showed that sexual multipartner. The fetus is in good condition based on obstetrical examination and ultrasonography. Wide excision was performed.

Conclusion: The treatment is controversial, but surgical approach has come to a choice. Skin reconstruction following radical or wide excision has been the best choice in treating the warts, so minimal invasive surgery is the first line management of the disease.

Keywords: Pregnancy, condyloma acuminata, sexual transmission.

Profile of patients of Congenital cleft lip in general hospital dr. Zainoel Abidin Hospital Banda Aceh, Indonesia 2018 – 2020

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Introduction: Congenital cleft lip is a complex defect that poses significant aesthetic and functional problems. Cleft lip is the most common disorder causing craniofacial deformity, reaching 65%. Most cases of cleft lip tend to involve the combined effects of environmental and genetic factors during the first week of pregnancy. The distribution of the number of cleft lip cases in several areas can vary.

Methods: This is the basis for researchers to see how the incidence of cleft lip is especially in Aceh Province. This study used an observational method with quantitative descriptive design, as well as a cross sectional approach with the aim of describing the characteristics of cleft lip patients at Malahayati General Hospital.

Results: The study population was 300 people and data samples were obtained from medical records from patients who underwent cleft lip surgery at Malahayati General Hospital in January 2018 - December 2020. The results of sociodemographic characteristics showed that the distribution by sex of 297 subjects showed the highest incidence in women was 149 patients (50.2%). Based on the age characteristics, the age group under 2 years old is the age group that undergoes the most surgery around 162 people (54.6%), with the youngest sample being 1 month old and the oldest sample being 48 years old.

Conclusion: In this study, it can be concluded that the incidence of cleft lip in Malahayati General Hospital is the highest experienced by women, and those under 2 years of age most often undergo surgery.

Keywords: Cleft lip, congenital abnormalities, sociodemographic characteristics.

Neurocutaneous melanosis manifesting as epilepsy in a patient with extensive congenital melanocytic nevus: a case report

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Background: Neurocutaneous melanosis (NM) is a rare condition characterized by abnormal proliferation of melanocytes in the central nervous system and skin that is present at birth. NM should be suspected in patients with extensive congenital melanocytic nevus (NMK), where NMK with multiple satellite lesions has a higher risk of NM. NM generally appears in the first 2 years of life with the main clinical manifestations of seizures, headache and vomiting. NM has a poor prognosis; most patients die within 3 years of birth. An accurate and prompt diagnosis is essential to maximize the patient's quality of life.

Case Description: A 2-year-old boy with recurrent seizures since the age of 3 months with a frequency of 1-2 times per month. Seizures in the form of stiffness throughout the body lasts for approximately 1 minute, during the seizure the patient is unconscious and after the seizure, the patient is weak. The patient had no previous history of fever and the results of the physical examination did not reveal any neurological deficits. The patient was born vaginally, at term, and had adequate birth weight. At birth the patient had black patches covered with hair, irregular in shape of varying sizes spread all over the body and diagnosed as widespread congenital melanocytic nevus. Electroencephalography did not reveal any epileptiform waves or background slowing. Magnetic resonance imaging (MRI) the head showed bilateral hyperintense lesions in the hippocampus, cerebellum and pons that corresponded to neurocutaneous melanosis. The patient received anti-seizure drug therapy in the form of valproic acid and experienced clinical improvement, but further examination and observation still needed against this patient.

Conclusion: NM is a potentially life-threatening condition associated with MNK that arises as a result of genetic mutations. Proper diagnosis and management are urgently needed because of the poor prognosis. Continuous follow-up is also very important to monitor the progress of the patient's disease.

Keywords: epilepsy, neurocutaneous melanosis, extensive melanocytic congenital nevus.

Autopsy Findings in Cases of Death due to Traumatic Asphyxia: a case report

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Background: Traumatic asphyxia is a condition caused by chest compression by a heavy object, which prevents the movement of the chest wall so that it can cause respiratory problems and death. Death from traumatic asphyxia is rare among homicide victims examined at our institution, so we need to report this unique case.

Case Description: An unknown victim, female, with a height of 159 cm, was examined at the forensic medicine department of the Zainoel Abidin Hospital, to determine the cause of victim death. The victim was found in the forest in the Peukan Bada area, Aceh Besar, Aceh Province, Indonesia. On autopsy findings, multiple bruises were found all over the victim's body, indicating blunt trauma. Bruises were found on the chest, back, shoulders, and upper and lower extremities accompanied by blood resorption under the skin. Based on the police investigation, it is known that the perpetrator buried the victim after the perpetrator hit the victim several times. The forensic medical examination aims to determine the mechanism of death of the victim caused by traumatic asphyxia.

Conclusion: Cases of death due to traumatic asphyxia are rare and mostly accidental. Findings at the scene, autopsy and technical studies are needed to solve this case. A thorough autopsy can be helpful in finding signs of traumatic asphyxia, although in this case the decomposition process can make it difficult to determine the cause of death of the victim.

Keywords: Autopsy findings, Blunt trauma, Cause of death, Traumatic asphyxia

Arise with behavior disorder manifestation in epilepsy: a case report

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Background: Epilepsy is a brain disorder characterized by continuous predisposing factors for the occurrence of an epileptic seizure, and is also characterized by the presence of neurobiological, cognitive, psychological, and social consequences of the condition. The results of the study of the Epilepsy Study Group of the Indonesian Neuroscientist Association at several hospitals in 5 major islands in Indonesia received 2,288 person with epilepsy with 21.3% of new cases. Patients with epilepsy can sometimes manifest strange behavior. Sometimes, this strange behavior cannot be recognized by seizures caused by other illnesses and nonepileptic events, or psychiatric disorders.

Case Description: An 18-year-old man with a history of seizures that has been experienced since the age of 15 years and seizures still occur today. Clinical manifestations that occur during seizures are always the same. On awakening, the patient looks confused and performs movements such as banging his head. Lips look like tasting and gushing. The patient does not seem to recognize the people around him. After the seizure the patient looked weak. Seizures occur for 1-2 minutes with a frequency of 1-2 times a week. On routine electroencephalography (EEG) examination, a sharp wave was found in the right frontal. The patient was advised to undergo an MRI of the head.

Conclusion: A case of 18-year-old man with clinical manifestations that occur during seizures always with the same pattern. Electroencephalography (EEG) examination revealed a sharp wave on the right frontal. The patient was advised to undergo an MRI of the head.

Keywords: epilepsy, seizures, behavioral disorders, electroencephalography.

General epilepsy epission in tuberous sclerosis with giant angiofibroma and growth disorders In child: a case report

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Background: Tuberous Sclerosis or Bourneville-Pringle disease is children's most common single gene disorder. This disease has an incidence of 1 in 9000 live births. An autosomal dominant genetic multisystemic disease characterized by abnormalities of many organs, especially the brain, skin, heart, kidneys and lungs resulting from mutations encoding the TSC1 and TSC2 genes. The most common symptoms are epilepsy, mental retardation and angiofibroma.

Case Illustration: A boy aged 15 years with a history of seizures that have been experienced since the age of 1 year until now. Convulsions throughout the body with a duration of less than 5 minutes and a frequency of 3 to 4 times a day, during the seizure the patient is unconscious and after the

seizure the patient looks weak. The patient also had developmental disorders. General examination revealed angiofibroma on the face and nose and giant angiofibroma on the back of the head. Found too periungual fibroma on the toes and hands. Hypopigmented macules and shagreen patches on the patient's chest and back with multiple numbers and sizes of lesions. The EEG recording shows a background slow activity (BSA) and sharp epileptiform waves in the right and left frontal regions. CT Scan and MRI examination of the patient's head revealed a periventricular subependymal nodule. Anti-epileptic drug therapy levetiracetam and valproic acid are the options used to treat generalized epileptic seizures in this patient. Operative wide excision and closure of the defect with an orticochae flap was performed on the giant angiofibroma in this patient.

Conclusion: Tuberous sclerosis is a rare autosomal dominant genetic disorder caused by mutations in the TSC1 or TSC2 gene where the diagnosis is made based on the diagnostic criteria for Tuberous Sclerosis, namely there are 2 major criteria or 1 major criterion and 2 minor criteria. Multidisciplinary management is very much needed in the treatment of tuberous sclerosis.

Keywords: Tuberous sclerosis, generalized epileptic seizures, developmental disorders.

A challenging triple valve surgery for long-standing pulmonary hypertension in rheumatic heart disease: a case report

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Background: Pulmonary hypertension (HP) was defined as an increase in mean pulmonary artery pressure above 25mmHg at rest, and above 30mmHg during activity. In patients with valvular disease, this indicates a phase of decompensation, and is an advanced compensatory mechanism. Rheumatic heart disease is inflammation of the heart due to an autoimmune reaction to group-A streptococcal infection. Mechanical intervention is the primary choice for correcting valvular disease.

Case description: We report a case of a patient, a 38-year-old female, who was brought to the hospital with complaints of shortness of breath that worsened with activity, chest pain radiating to the left arm, palpitations, and a history of fainting. The patient was previously scheduled to undergo aortic and mitral valve replacement surgery at the end of 2020. However, it could not be carried out due to the covid-19 pandemic. The patient was consulted for thoracic, cardiac and vascular surgery from the cardiology department at Zainoel Abidin Hospital, Banda Aceh. On June 17, 2022, the patient underwent mechanical heart valve replacement surgery on the aortic and mitral valves using St.Jude no.17, and tricuspid valve repair was performed. The patient has shown significant improvement.

Conclusion: In patients with left heart disease, pulmonary hypertension is a marker that the disease has reached an advanced stage and is often associated with a poor prognosis. Patients with aortic and mitral valve disease with pulmonary pre-hypertension pose a challenge to cardiac surgeons and anesthesiologists. The entire team must be prepared for possible complications that may occur during surgery to ensure a good prognosis.

Keywords: pulmonary hypertension, valve disease, rheumatic heart disease.

Massive bronchiectasis with severe pulmonary symptoms, a successful pneumonectomy: a case report

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Background: It's a widely known concern that patients with treated pulmonary tuberculosis (TB) are prone to post tuberculosis sequel and/or complications such as bronchiectasis. According to research articles, this comes as no surprise, as pulmonary TB is a destructive process that leads to cicatrization, alteration of parenchyma, bronchiectasis, and scarring of the lung, with reduction of lung volumes and an impact on pulmonary function. PTLD is an overlapping spectrum of disorders affecting large and small airways. A six-monthly respiratory clinic follow-up and examinations in the 2 years after TB treatment is needed. Treatment options for bronchiectasis patients include lung rehabilitation, long-term antibiotics, and occasionally surgical removal such as pneumonectomy of the involved lung may be indicated when there is continued failure of medical therapy.

Case Description: A 36-year-old male was admitted to the ER with complaints of shortness of breath, purulent cough, and a central chest pain. No history of diabetes and hypertension. The patient underwent 6 months of successful pulmonary TB treatment in 2016. On the 25th of March 2022, the patient was treated in the pulmonology department of Zainoel Abidin Hospital, and was diagnosed with bronchiectasis. After recurrent non-responsive treatment, the patient was consulted to the CTVS department. On the 13th of April the patient successfully underwent pneumonectomy of the left lung, and was treated for seven days post-operative and has since made significant improvements.

Conclusion: Awareness of post-TB lung health and possible complications following treatment has become increasingly important. It is increasingly recognized that patients completing TB treatment should be followed up in time and given recommended examinations to rule out further infections. Pneumonectomy is defined as the surgical removal of the entire lung, and is indicated in patients with declining lung function and for those who aren't responsive with medication.

Keywords: pulmonary tuberculosis, post-treatment complication, sequel, bronchiectasis.

Diagnosis and management of chronic ectopic pregnancy: a case report

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Introduction: Chronic ectopic pregnancy is a form of tubal pregnancy in which there is gradual disintegration of the tubal wall with slow and repeated bleeding episodes leading to the formation of a pelvic mass. Clinical manifestations and laboratory evaluation are often atypical. Chronic inflammation and adhesions that distort the anatomical position of the reproductive organs usually complicate the surgical management.

Case Description: A 35-year-old woman with complaints of abdominal pain during menstruation since 1 month before her admission. The patient also complained of vaginal bleeding, abdominal distention on her left side, and a palpable lump. Ultrasound examination revealed a hypoechoic mass sized 4.5 x 4.3 x 4.1 cm without a gestational sac and negative free fluid indicating suspicion of chronic ectopic pregnancy.

Conclusion: Awareness of the clinical manifestations and course of the disease in ectopic pregnancy with mild but persistent symptoms needs to be increased so that it can be diagnosed and treated quickly.

Keywords: chronic ectopic pregnancy, tubal pregnancy.

Ectopic pregnancy in left fimbria: a case report

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Introduction: Ectopic pregnancy occurs in 1.3-2% of all pregnancies and accounts for 0.25 to 2% of all pregnancies worldwide. The most common site for implantation for ectopic is fallopian tube (98.3%), ampullary (79.6%), isthmic (12.3%), fimbria (6.2%), ovary (0.15%) and abdominal cavity (1.4%). In a fimbria ectopic, the implantation is at the fimbria of the fallopian tube which is closest to the ovary. Morbidity and mortality associated with an extrauterine pregnancy are directly related to the length of time required for diagnosis and treatment.

Case Description: Women, 29 yo, G1, came with complaints of sudden onset of pain abdomen and felt 2 hours before coming to hospital. Pain is felt continuously and does not disappear with therapy and rest. Bleeding from the birth canal is denied. The patient only found out that she was pregnant when she was examined in the ER. The transvaginal ultrasound examination shows a hematocele and free fluid in the right adnexa.

Conclusion: Although fimbria pregnancy has a low incidence, the patient must be treated immediately. Surgery is performed to identify an ectopic pregnancy in the fimbriae of the fallopian tube.

Keywords: ectopic pregnancy, fimbriae.

Embryotomy in labour with after coming head: a case report

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Introduction: Entrapment of the after-coming head (EAH) is a rare case. EAH cases are mostly found in cases of fetal malpresentation, especially breech presentation. Other risk factors are macrosomia, hydrocephalus, narrow maternal pelvis, prolonged second stage of labour, and incomplete cervical dilatation. In the case of a deceased fetus, embryotomy with the craniotomy

method is the main treatment option.

Case Description: This case report reports of a 29-year-old woman G4P3A0, full-term came with the chief complaint of the baby's head being stuck in the birth canal. The patient previously had an examination at a traditional healer and sent to hospital. The baby's legs, buttocks, and body were born during the transfer. But the head cannot be born. The patient claimed come from far away with a 2-hour journey. Ultrasound examination revealed hydrocephalus.

Conclusion: The patient was diagnosed with G4P3A0, pregnant at term, breech delivery after head expulsion and fetal death. After being treated with craniotomy, a baby girl was born with a weight of 3500 grams, body length 49 cm, Apgar score 0, the placenta was born complete. Mother is in good condition.

Keywords: entrapment of the after-coming head, breech presentation, craniotomy.

Case report: giant urethral calculi induce urinoma

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Introduction: Penile urethral calculus is a rare form of urolithiasis with an incidence lower than 0.3%. Due to the high incidence of bladder calculi, urethral calculi have been reported in developing countries, especially among childhood populations.

Case Description: We presented a case of 37-year-old male who came to the emergency room complaining of pain and swelling in the penile for four days. A solid mass with dimensions 5 x 2 cm and tenderness were identified from the physical examination. The mass was located within the urethra pars pendulous and fossa navicularis. Computed Tomography images depicted a large urethral calculus within fossa navicularis. Urethral calculus extraction was conducted following the meatotomy procedure and drainage urinoma.

Conclusion: Treatment of the urethral stones mostly depends on the anatomic location, the width of the stone, and the associated anatomical pathology of the urethra. Large urethral stones can induce urinoma formation. The stones at the time of surgery were embedded in the urethra, making it difficult and near impossible to be removed via standard minimally invasive techniques such as urethroscopy. Failure to resolve urinoma leads to an abscess, electrolyte imbalance, hydronephrosis, and urosepsis. First-line treatment usually involves a drainage catheter placed into the urinoma and empiric antibiotics

Keywords: penile urethral calculus, urinoma, extraction, drainage.

Case report: pregnancy with torsion of ovarian cyst

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Background: Twisted ovarian cyst is a rare emergency gynecological case where this case is caused by complete or partial rotation of the ovarian vascular pedicle. Risk factors for torsion of ovarian cysts include pregnancy, cysts, history of previous abdominal surgery and cyst size greater than 5 cm.

Case description: A 26-year-old woman, G2P1, came with a complaint of sudden severe lower abdominal pain for 3 hours before admission to hospital. Pain felt intermittently and did not disappear with pain relief or rest. Nausea and vomiting felt by the patient once. Bleeding from the birth canal was denied. The patient said she was 12 weeks pregnant. HPHT 01 January 2021 and TTP 8 July 2022. The last ultrasound was on 16 December 2021 and the fetus was in good condition. The results of the first ultrasound examination showed that there was a cyst originating from the right ovary.

Conclusion: Ovarian cysts during pregnancy can form functionally so they are generally managed conservatively. Twisted ovarian cyst in pregnancy is a medical emergency and requires immediate surgical treatment.

Keywords: twisted ovarian cyst, pregnancy, management.

Case report: thyroglossal duct cyst

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Introduction: About 7% of the world's population has a thyroglossal duct cyst. Thyroglossal duct cysts are the most common non-neoplastic mass in the neck, accounting for 40% of primary tumors in the neck. It is said that almost 70% of all cysts in the neck are thyroglossal duct cysts. Thyroglossal duct cyst is a congenital mass in which the failure of closure of the thyroglossal tract after the decrease of the thyroid gland during pregnancy.

Case Description: In this case report, a 43-year-old woman with complaints of a lump in the neck has been around for more than 10 years. As a child, the patient did not notice a lump in the neck and thought the lump was Adam's apple. Initially, the lump on the neck was small, but it got bigger and bigger and in the last 2 years it was accompanied by a feeling like suffocation. This feeling arises when you want to sleep on your back. Thyroid function examination was found to be normal and neck ultrasonography showed a suspected thyroglossal duct cyst, right and left thyroid was normal. Management in this case is the Sistrunk technique. The technique is excision of the entire cyst and thyroglossal duct to the foramen cecum at the base of the tongue and excision of the midline of the tongue bone to reduce recurrence. Histopathological examination of the surgical specimen showed a thyroglossal duct cyst.

Conclusion: The development of this case showed good healing and 3 months after excision there was no recurrence.

Keywords: thyroglossal duct cyst, cystrunk technique, neck lump

Outcome of leprosy associated asthma in pregnancy: a case report

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Introduction: Asthma bronchial is a disease characterized by increased sensitivity of the tracheobronchial tree to various stimuli. During an asthma

attack, there will be bronchospasm, mucosal swelling, and increased secretions in airway. The incidence of asthma in pregnancy in Indonesia is around 3.7- 4%, most commonly occurring at 24 to 36 weeks of gestation. The effect of asthma on the mother and fetus depends on the frequency and severity of asthma attacks, because it can cause effects in the form of hypoxia. The state of hypoxia affects the fetus in the form of abortion, premature delivery, and fetal weight that is not in accordance with gestational age. Symptoms that can be felt are shortness of breath, cough, wheezing and can be accompanied by chest pain.

Case Description: A 35-year-old woman came with complaints of heartburn for 2 hours before admission to the hospital, the patient denied amniotic fluid flow, blood was found to come out. Fetal movements were felt active. The patient claimed to be 9 months pregnant with LMP on 27 December 2021, and EDD on 27 September 2022, with a gestational age of 39-40 weeks. ANC to the obstetrician was 3 times and the midwife was 5 times. No complaints of vaginal discharge, bowel and bladder within normal limits. The patient also had a history of asthma when she was 8 months pregnant, with complaints of shortness of breath, easy fatigue and coughing, the patient denied chest pain. Wheezing was also claimed sometimes. The patient had been treated by a pulmonologist, given 3 types of drugs to be taken if shortness of breath occurs. The patient complained of painless lesions on the hands, trunk and feet. This complaint has been felt in the last 3 months. There is no thickening of the nerves or numbness in the joints. The patient was diagnosed at the regional hospital with Morbus Hansen and is currently on treatment.

Conclusion: Asthma in pregnancy will cause hypoxia to the fetus which affects the development of the fetus, therefore, prompt and appropriate management will reduce the risk to the mother and fetus. Outcome infants showed no sign of Morbus Hansen infection.

Keywords: pregnancy, asthma, asthma management, leprosy.

Fahr's disease with seizure: a case report

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Introduction: Fahr's Disease is a disorder resulting from the onset of calcification in the basal ganglia, is symmetrical, and is characterized by the presence of calcium deposits. Common symptoms include movement disorders, psychiatric disorders, seizures, and cognitive impairment. The incidence of Fahr's Disease is still relatively rare, which is estimated to be less than 1:1,000,000 cases.

Case Description: A 55-year-old man came with complaints of seizures accompanied by decreased consciousness. The patient had a history of movement disorders such as tremor, rigidity, bradykinesia, and hallucinations. Physical examination revealed E2M4V2, Babinsky's sign was positive on the right leg. Laboratory results found calcium levels 3.9mg/dL, Phosphorus 6.4mg/dL. Non-contrast head CT scan found bilateral and symmetrical calcifications in the basal ganglia, thalamus, corona-radiata, and cerebellum areas. In this case, the patient was given symptomatic treatment according to the complaints experienced.

Conclusion: Fahr's Disease is a rare disease that belongs to the idiopathic basal ganglia calcification characterized by abnormalities in calcium and phosphorus. The prognosis for Fahr's disease varies depending on the state of the calcification

experienced by the patient.

Keywords: Fahr's Disease, Idiopathic Basal Ganglia Calcification, Seizures

Spontaneous subdural hematoma in a patient with mitral and aortic valves using warfarin: a case report

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Introduction: Acute Spontaneous Subdural Hematoma (SSH) is a rare case. The incidence of acute SSH is about 2% - 6.7%. Patients with prosthetic heart valves are quite rare cases, where they must use long-term anticoagulants to prevent thrombosis. By presenting this case, we aim to highlight the importance of considering the diagnosis of SSH in a high-risk patient on anticoagulation even without a history of traumatic head injury or significant neurologic deficit.

Case Description: A 38-year-old woman came to the emergency department of the dr. Zainoel Abidin Hospital with complaints of severe headaches that had been felt since 3 days before being admitted to the hospital. A throbbing headache in all head areas is not relieved by pain medication. Patients with a history of postoperative mitral and aortic valve mechanics 1 month ago and on anticoagulant such as warfarin for 1 year, no history of previous trauma. GCS 15 was obtained with a pain scale of 10. From a CT scan of the head, it showed a hyperdense lesion in the right temporoparietal region in the subdural space, a shift in the midline of > 0.5 mm. Blood test showed INR 3.9. Following the neurosurgeon's opinion, surgical intervention was considered risky and inappropriate because of the minimal neurologic deficit. Treatment is directed at protecting the heart from thrombosis while ensuring the hematoma does not expand. Warfarin was discontinued because the INR was risky and was above the therapeutic target range (2.5–3.5).

Conclusion: The diagnosis of SSH in this case was based on clinical symptoms such as headache, no history of previous trauma and risk factors for warfarin use due to post-prosthetic valve insertion, with increased INR results. SSH is a rare case. Long-term use of anticoagulants is a risk factor for increased intracranial bleeding if the INR exceeds the therapeutic range. The management of SSH should go through a multidisciplinary team with neurosurgery and cardiology involvement.

Keywords: Spontaneous Subdural Hematoma, warfarin, prosthetic valve replacement.

Blunt abdomen trauma in Zainoel Abidin Hospital 2019-2021

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Introduction: Blunt abdominal trauma is trauma to the abdomen without penetration into the peritoneal cavity. 1 Abdominal trauma is the cause of death in about 7-10% of trauma patients. The organs most frequently injured due to blunt abdominal trauma are the spleen (40-55%) and liver (35-45%). 2,3 Blunt trauma sometimes does not cause obvious abnormalities on the body surface,

but can result in injuries in the form of damage to surrounding organs, rib fractures, deceleration injuries, compression injuries, sudden increases in blood pressure, rupture of hollow viscus, contusions or lacerations. underlying tissues and organs

Method: This study uses a descriptive method with retrospective data collection using secondary data sources, namely the 2019-2021 medical records conducted in August-September 2021 at the dr. Zainoel Abidin Banda Aceh. Inclusion criteria: data on patients with blunt abdominal trauma diagnosed in 2019 - 2021. Exclusion criteria: incomplete medical record data. The variables in the study were: Age, gender, affected organs, and causes. The univariate analysis explains and describes the characteristics of variables made in the form of graphs, measures of central tendency and frequency distribution tables.

Results: Based on the results of research that has been carried out on 60 medical records of patients with blunt abdominal trauma at dr. Zainoel Abidin Hospital Banda Aceh. The organ most frequently injured is the spleen (more than 50% of cases) followed by the liver and intestines. This is because the trauma mechanism in blunt trauma is due to rapid decelerations and the presence of organs that do not have flexibility (non-compliant organs) such as the liver, spleen, pancreas, and kidneys. The most common causes of blunt trauma worldwide are traffic accidents, violence, or persecution. A laceration often happens, which can cause tearing and subcapsular hematomas in the solid organs of the viscera. Indications for laparotomy in patients with blunt abdominal trauma are as follows: signs of peritonitis, shock or uncontrolled bleeding, clinical deterioration during observation and findings of hemoperitoneum after focused assessment by sonographic examination for trauma (FAST) or diagnostic peritoneal lavage (DPL). Surgical treatment is not indicated in every patient with a positive FAST scan. The overall prognosis for patients with blunt abdominal trauma is good. The mortality rate for hospitalized patients is about 5-10%. Delayed treatment is associated with very high morbidity and mortality if gastrointestinal perforation is involved

Conclusion: The picture of blunt abdominal trauma patients was found in the age range of 26-35 years, most suffered by men, the organ most affected was the spleen followed by the liver, most often caused by accidents, the action taken was surgery with a life outcome.

Keywords: blunt trauma, medical records, abdomen.

Vaginal birth after cesarean section in previous c-section 2 times in distric country

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Background: Trial of labor after cesarean section can be a choice on maternity with cesarean history. The successful trial of labor is then called vaginal birth after a cesarean (VBAC). The incidence of SC in Indonesia has been increasing over the year. Several studies have shown an increased risk of problems in subsequent pregnancies in mothers with a history of cesarean section.

Case description: A 30-year-old woman, G2P1, came with the complaint of contractions are felt since 6 hours before admission to the hospital, a discharge of blood mucus accompanies this complaint, but out of the water is denied, the

fetal movement active. The patients admitted 9 months pregnant according to 39-40 weeks pregnancy. During this time, the patient 10 times routine pregnancy control at obstetricians to prevent repeated C-Section and prepare vaginal delivery in this pregnancy after previous C-Section 2 times, And the last ultrasound examination, it is said that the fetus is in good condition but the mother asked for a mode of delivery is by pervaginam delivery, although the various risks that would occur had been explained, the mother remains confident of performing pervaginam delivery despite had a history of cesarean section 2 times before. vaginal examination: Anterior, soft, T: 1 cm, ϕ 3 cm, left lateral fontanela, positive amniotic membrane, Hodge I-II head.

Conclusion: Prenatal care is a concern for pregnant women with the aim of preventing complications and to reduce the incidence of morbidity and mortality in mothers and fetus, this concern consists of health promotion, treatment risks, and interventions against risk and conditions that are not accommodated. All these activities require cooperation, effort and coordination from women, families, and prenatal care providers and other specialist providers

Keywords: vaginal birth, district country, prenatal care.

Pregnancy with chorioangioma

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Background: Placental chorioangioma is the placenta's most common benign non-trophoblastic tumor. Chorioangiomas derive from primitive chorionic mesenchyme and are commonly vascular. They account for approximately 1% of all pregnancies.

Case description: We report a case of a 32-year-old woman, G2P1, 38-39 weeks gestational age, with suspected chorioangioma. The patient presented with stable hemodynamics and no notable symptoms. From the ultrasound conducted, a mass is found in the placenta, with a diameter of 5.77 x 5.95 x 5.42 cm, with minimal neovascularization. It was decided to perform cesarean section on this patient.

Conclusion: Evaluation of chorioangioma with various diagnostic tests has been conducted to confirm the diagnosis and provide appropriate management. Ultrasound examination is the gold standard in diagnosing placental chorioangioma during pregnancy and is further proven by histopathological examination. Management of chorioangioma is usually conservative. Specific treatment is unnecessary in asymptomatic cases; however, careful monitoring with serial ultrasound examinations is necessary to predict early complications.

Keywords: chorioangioma, pregnancy, placenta tumor.

Case report: clinical manifestations and surgical approach of retrosternal goiter

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Background: Retrosternal goiters are sometimes found in patients with thyroid disease. The incidence of retrosternal goiters among patients with thyroid goiters is reported to range from 5.1 to 15.7%. These goiters remain in the chest, usually entirely asymptomatic and undetected, until it's discovered as an incidental findings. We are reporting a case involving a large retrosternal goiter, which was safely resected via a transcervical and full sternotomy approach.

Case Description: A 66-year-old woman visited a hospital due to a chief complaint of difficulty in breathing and cough. No history of trauma. General examination was insignificant, it was a normochest from the inspection, there is no retraction. A decreasing vesicular sound on the right lung was auscultated by using a stethoscope. A blood examination revealed a TSH level <0.05 uIU/ml, and FT4 was 7,61 pmol/l. The chest X-ray showed a tumor shadow in the upper-middle field of right lung without pleural effusion. Ultrasound showed that the suspicious of a mass with calcification in right lobe thyroid and enlargement of left lobe. Computed tomography (CT) of chest revealed that tumor shadows connected to thyroid gland. The patient was in a supine position with her neck well extended. A cervical skin incision was made, a median chest midline incision, and a full sternotomy was performed. We identify the tumor in sized 9x6x4 cm after total removal. Under microscopic examination, tumor was identified as a papillary thyroid adenocarcinoma, follicular cell differentiation variants.

Conclusion: Most retrosternal goiters can be managed through the transcervical approach, but a full sternotomy is required when a retrosternal goiter extends to both sides of the thorax and/or has a larger diameter than thoracic inlet or airway constriction is revealed. A full sternotomy provides excellent exposure and can reduce the risk of complications.

Keywords: retrosternal goiter, thyroid, sternotomy

Thyrotoxicosis periodic paralysis: a case report

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Background: Hyperthyroidism is a condition characterized by increased thyroid hormone from the thyroid gland. Excessive circulating thyroid hormones irrespective of the source can lead to a clinical syndrome known as thyrotoxicosis. Potassium plays a significant role in maintaining the

potential electrical membrane in the body and delivering nerve impulses in the muscles. Thyrotoxic Periodic Paralysis (TPP) is a condition characterized with a triad consisting of acute hypokalemia, episodic muscle paralysis, and thyrotoxicosis.

Case Report: We reported a 74-year-old woman came with chief complaints of weakness in both legs and hands. Before weakness occurred, patient admitted that she felt numbness at the legs spread to the hands. On physical examination of the patients consciousness compos mentis, with blood pressure of 150/90 mmHg, heart rates of 78 bpm, respiratory rates of 18 times per min. On the examination of the eye, the eyes were slightly protruding. There was a goiter on her left neck. The extremities found muscle strength to be scale 3 on both superior limbs and scale 2 on both inferior limbs. The laboratory test results were FT4 98.93 pmol/L, TSHs 0.005 µIU/mL, Potassium 2,8 mmol/l. On thyroid ultrasound examination revealed multiple solid nodules on the right thyroid gland and enlarged left thyroid gland with multiple homogeneous nodules. Reactive limfonodules in the right region of the lever 2, 3, 5 and the left region of the liver 1a, 2, 3, 5 were found by neck ultrasonography. The patient was diagnosed with thyrotoxic periodic paralysis and grave disease. Patient received 25 mEq KCl drip therapy in 500 cc RL at a rate of 20 drops/minute, propranolol 10 mg twice per day, and thyrozol 20 mg per day.

Discussion: TPP is a condition characterized with a triad consisting of acute hypokalemia, episodic muscle paralysis, and thyrotoxicosis. It is a rare emergency complication due to untreated hyperthyroidism which is more frequently seen in males. Management of TPP is by correcting hypokalemia and treating the underlying hyperthyroidism. The aim of giving intravenous potassium was to accelerate muscle recovery and prevent cardiopulmonary complications. However, the danger of rebound hyperkalemia due to the release of potassium and phosphate from cells upon recovery need to be considered.

Conclusion: TPP is a rare emergency complication due to untreated hyperthyroidism which is more frequently seen in males. This condition characterized with a triad consisting of muscle paralysis, acute hypokalemia without a total body K + deficit, and hyperthyroidism which is not only a neurology and endocrinology emergency but also nephrology.

Keywords: hypokalemia, thyrotoxic periodic paralysis.

Neutrophil lymphocyte ratio in hemorrhage stroke (pontis haemorrhage) at young adult with hypertension

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Background: Pontine hemorrhage is a rare clinical feature of stroke or brain hemorrhage. Few cases have been reported worldwide particularly in Asia.

Case report: We report the case of a female 22 years old patient, was admitted

in the Neurology Department of Dr. Zainoel Abidin General Hospital, Banda Aceh, Indonesia, for an abrupt onset of left body side weakness two hours before admission. That weakness was preceded by acute headaches and rotatory vertigo with vomiting. Physical examination found paralysis of right abducens nerve palsy, right ipsilateral facial nerve palsy, and left hemiparesis. The brain CT scan shown in the pontine hyperdensity area is pontine hemorrhage. A high neutrophil-lymphocyte ratio was found on a complete blood count, indicating inflammation. The patient received citalopram, methylcobalamin, and physiotherapy as treatment with clinical improvement. And she has been discharged 12 days later

Conclusions: The diagnosis and management of brainstem stroke bring a considerable burden to the healthcare system, the patient, the family members, and the society at large. The slow increase in the global burden of stroke has been steadily increasing.

Keywords: pontine hemorrhage, stroke, lymphocyte ratio.

Case report: anesthesia management in prune belly syndrome

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Background: Prune-Belly syndrome (PBS) is a congenital birth defect characterized by a triad including abdominal wall muscle aplasia or hypoplasia, urinary tract abnormalities and bilateral cryptorchidism. The severity of renal dysplasia and urinary tract abnormalities and pulmonary hypoplasia are the main characteristics that determine the patient's final outcome.

Case Report: The neonate was 13 days old and weighed 1500 grams. The patient was suspected of having anorectal fistula malformations and Prune Belly syndrome and a double-barrel colostomy was performed. On preoperative examination, it was found that the baby was active, respiratory rate was 20x/i, oxygen saturation was 95% in Room Air, HR: 105x/i and had no fever. Colonic dilatation was found as seen from the patient's abdominal wall. The patient was prepared for intraoperative monitoring with the standard of The American Society of Anesthesiologists (ASA), the stomach was compressed using OGT. Sevoflurane (2%) with fentanyl 1.8 mcg, induction with propofol 10 mg and atracurium 1 mg, Endotracheal intubation with ETT no. 2.0 non-cuff. Ventilation using Jackson-Reese with TV ranging from 6-8 ml/Kgbb, RR: 30-35 x/minute, Anesthesia maintenance with sevoflurane (MAC 2 -3 vol%) Fasting deficit replaced with 36 ml D5 NS fluids and fluid maintenance 6 ml/hour, minimal intraoperative bleeding. No blood and blood components were transfused. Operation duration was 120 minutes, postoperative NICU care was on a ventilator, and given 1 mg antiemetic and analgesic for Paracetamol 15 mg/KgBW.

Conclusion: Prune belly syndrome is a rare congenital anomaly, characterized by a triad of anomalies consisting of anterior abdominal muscle deficiency, urinary tract dilatation, and testicular abnormalities. A multidisciplinary team is required in the management of PBS because many organ systems are affected. Prompt diagnosis and management can improve survival

Keywords: Prune Belly Syndrome, Anesthesia Management, Neonates, Congenital Anomalies

Characteristics of burned patients in Zainoel Abidin Hospital Banda Aceh period of August 2021 – August 2022

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Background: Burns is a complex trauma due to intensive heat contact, which directly hits the body, thus damaging human skin (thermal burns). Burns are a type of trauma with high morbidity and mortality, requiring special treatment from the early to the advanced stages. The mortality rate of burn patients worldwide can be around 195,000 per year.

Objective: To describe the characteristics of burn patients in the Plastic Surgery Division of the Regional General Hospital, dr. Zainoel Abidin Aceh Province in August 2021 – August 2022.

Methods: We retrospectively explored and included all patients diagnosed with uncomplicated burns. Meanwhile, patients with incomplete or damaged medical record data, which describes their identity and does not conclude the information needed in the study, have been excluded from the study.

Results: Most burn patients by gender were men aged 21-30 years old. Patients with burns are most recently educated in high school/equivalent. The work most occupied by burn patients in that period was homemakers. The most common degrees of burn were IIa and IIb.

Conclusion: Burns can occur in all circles of society, but several factors can be dominant characteristics among patients.

Keywords: characteristics, burn patients, Aceh

LATE BREAKING

The effect of single time tahajud prayer on the acute response of blood pressure in men

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Background: Prayer is a routine physical activity with complex, regular, and structured movements. Tahajud is a nighttime prayer that aids in health issues such as blood pressure control. This study aimed to investigate how single-time Tahajud affected systolic and diastolic blood pressure to make Tahajud a physical activity that can help prevent hypertension.

Methods: The study was a clinical trial using healthy human subjects aged between 18 and 25 years. A total of 24 men were divided into two groups: the control group (n=12) and the trial group (n=12). The control groups consist of people who have never performed the Tahajud prayer, whereas the trial groups consist of people who have performed the Tahajud prayer regularly (2-11 rakaat) with a frequency of 3-7 times per week, and has been performed for more than six weeks. The treatment was Tahajud prayer, 11 rakaat (eight rakaat of Tahajud and three rakaat of Witir). Prayers are carried out in groups, together, and carried out between 3.30 and 4.30 a.m. with a duration of 25-35 minutes. Data analysis used an independent sample t-test ($p < 0.05$) and a paired sample t-test ($p < 0.05$).

Results and discussion: The findings revealed that there was no statistically significant difference in systolic (110.42 ± 9.16 and 114.58 ± 4.98 , $p = 0.11$ vs 120 ± 6.03 , and 115 ± 6.74 , $p = 0.08$) and diastolic blood pressure (76.77 ± 4.92 and 77.50 ± 4.52 , $p = 0.58$ vs 81.67 ± 8.35 and 79.17 ± 5.15 , $p = 0.19$) before and after Tahajud in the control and trial groups. The results showed that systolic and diastolic blood pressure increased slightly in the control group, on the contrary decreased slightly in the trial group, though both were not statistically significant.

Conclusion: Single-time Tahajud does not affect the decrease or increase in systolic and diastolic blood pressure. Tahajud is a physical activity that regulates vascular homeostasis, allowing it to control blood pressure; however, more research is required before Tahajud can be used as a mind-body medicine for hypertension prevention.

Keywords: Tahajud; systolic blood pressure; diastolic blood pressure; acute response

Correlation of platelet distribution width and mean platelet volume with a degree of liver cell carcinoma based on Barcelona Clinical Liver Cancer Criteria

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Background: Hepatocellular carcinoma (HCC) is the fifth most common cancer in the world, ranked second among the leading causes of death for all cancers. Treatment depends on the stage of the disease. Platelet activation is a part that plays a role in cancer development. Platelet distribution width (PDW) and mean platelet volume (MPV) are markers of platelet activation and relatively affordable tests.

Method: This research is an analytical study with cross sectional design and total sampling taken through medical records at dr. Zainoel Abidin General Hospital Banda Aceh. HCC disease was staged using the Barcelona Clinic Liver Cancer (BCLC) system algorithm. Spearman rank correlation test was used to assess the correlation coefficient between PDW and MPV values on the degree of HCC based on the BCLC system. The results were considered significant if the p-value < 0.05 .

Result: This study involved 56 patients grouped into 4 groups of HCC grades (16 patients with BCLC-A, 18 BCLC-B, 10 BCLC-C, and 12 BCLC-D). Results of the Spearman rank correlation test showed the correlation coefficient of PDW to the degree of HCC based on BCLC criteria was 0.79 ($p > 0.001$), while the correlation coefficient of MPV to the degree of HCC based on BCLC criteria was 0.74 ($p < 0.001$).

Conclusion: There is a strong correlation between PDW and MPV on the degree of HCC based on the BCLC criteria. PDW has a stronger correlation in predicting the degree of HCC based on the BCLC system criteria than MPV.

Keywords: Hepatocellular carcinoma, platelet distribution width, mean platelet volume

Effect of ipsilateral testicular torsion on the quality of sperm in contralateral testis of rat (*Rattus norvegicus*) wistar strain

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Background: Testicular torsion is the spermatic cord, which causes the interruption of blood flow to the testicles and tissue structure within the scrotum.

Methods: The study aimed to identify the effect of testicular torsion on the quality of sperm which include: concentration, morphology, and motility of the contralateral testis *Rattus norvegicus* performed using a completely randomized design (CRD) and divided into 3 groups: control (KO) and treatment (P1 and P2). The treatment group induced testicular torsion of 360° to the left for 4 hours. Each group consisted of 9 rats observed immediately after detorsion (rapid effects) and 9 after 30 days of detorsion (slow effect). Data were analyzed by ANOVA - One way and followed by the Tuckey HSD test.

Results: The results showed a significant difference ($p < 0.05$) in the concentration and morphology of spermatozoa between the control and treatment groups, but there is no real difference between P1 and P2. As for sperm motility are no significant differences ($p < 0.05$) for each treatment.

Conclusion: Testicular torsion changes the concentration, motility, and

morphology of spermatozoa contralateral testis.

Keywords: torsion, ipsilateral testis, quality of spermatozoa

Information source preference of booster doses of covid-19 vaccine in Indonesia: a nationwide survey

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Background: The effective dissemination of information of booster dose of coronavirus disease 2022 (COVID-19) vaccine is critical to public health measures to control the disease transmission. The aim of our study was to determine the preference source of information regarding booster dose of COVID-19 vaccine in community of Indonesia.

Methods: An online survey was conducted during the first two weeks of August 2022. We recruited 31 collaborators representing provinces on five islands of Indonesia for data collection. Individuals who have completed the primary doses of COVID-19 were asked their preference sources of information regarding booster doses of COVID-19 vaccine including government official websites, television news, mass media, religious leader, health care provider, workplace, family or friend, insurance service providers, social media and others.

Results: We received 3695 responses and 2935 of respondents were included. In total, 67.9% were female, with 47.9% aged between 21-30 years and 25.8% 31-40 years. Most of the respondents are Muslim (81%) and employed for wages (52.4%). The 74.1% of respondents trusted the information about booster dose of COVID-19 vaccine from government official website, 60.2% from health care providers, 42.0% from mass media, 35.5% from social media, 34.4% from television news and 28.0% from family or friends. The least preferred sources of information were insurance service provider (3.2%) and religious leaders (7.4%).

Conclusions: To our knowledge, this is the first study focusing on the source of information that Indonesian society trust about booster dose of COVID-19 vaccine. This finding may contribute to a better strategy in delivering booster dose information into community to increase the number of people receiving booster doses.

Keywords: COVID-19, information, vaccine resistance, booster dose, Indonesia

Design and prototype of g-cov: an app for detection covid-19 severity through asynchronous telemedicine

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Background: COVID-19 has become a pandemic and affect every aspect of our life. Lacking public awareness lately, delays in COVID-19 detection, diagnosis, and treatment will cause increased morbidity and mortality rates. Telemedicine is an integrated health service system and can be a way to improve COVID-19 findings, diagnosis, and treatment.

Methods: G-COV is a tool to determine the severity of COVID-19 based on chest X-Ray that have previously been processed through the Visual Geometry G (VGG16) analysis, which is the architecture of CNN from 800 chest x-rays determined by COVID - 19 at dr. Zainoel Abidin Hospital, Banda Aceh. Three sensors will detect vital signs connected to the ESP 8266 and be installed on the patient to display real-time sensor data. The program system is designed

using Visual Studio Code and the ESP platform. G-COV is an application that is integrated with applications on mobile phones. Furthermore, the COVID-19 diagnosis and therapy guide will be displayed in the application in real-time on firebase.

Result: The G-COV prototype consists of biosensors, and displays application prototype features of COVID-19 diagnosis and treatment page. The experimental results show that the device can assess temperature, pulse, and oxygen saturation which are the references for detecting the severity of COVID-19, with an accuracy of 92.45%.

Conclusion: All Indonesians can use G-COV to detect COVID-19 so that treatment guidelines can be received quickly. We will develop G-COV with a usability test before it is implemented in the community.

Keywords: Biosensor, COVID-19 Severity, Design, Prototype, Telemedicine.

Effect of Mesenchymal Stem Cell Administration on the reduction of intimal hyperplasia in arteriovenous fistula (AVF) local rabbit, Overview of the expression of HIF-1 α , eNos and MMP

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Introduction: Arterio-venous fistula (AVF) is the preferred vascular access and is permanent; however, its patency rate in the first 1 year is estimated to be only 62%. Failure of AVF maturation results from inadequate outward remodeling and premature development of intimal hyperplasia. Mesenchymal stem cells have been considered as a promising therapy for vascular injury.

Methods: This experimental laboratory study aims to determine the effect of mesenchymal stem cells in reducing intimal hyperplasia in AVF Rattus novergicus wistar rats, using a post test design approach (randomized control trial post test only design). The research group was divided into 4, namely KN as a negative control group, KP as a positive control group of AVF model rats with placebo therapy, P1 as treatment group of AVF model rats by giving mesenchymal stem cells in situ and P2 as treatment group of AVF model rats by giving cells intraperitoneal mesenchymal stem. The outcome of this study is that the administration of mesenchymal stem cells can be a scientific breakthrough and as a promising therapy to prevent and reduce intimal hyperplasia in AVF.

Conclusion: This research is still ongoing and in the process of carrying out it was found that the arteries and veins of rats were very small and not strong enough for AVF to be performed. Fortunately the researchers replaced the experimental animals with rabbits that had larger blood vessel anatomy. Mesenchymal stem cells will taken from the umbilical chord. The complete research results will be reported again afterward all research methodologies are carried out perfectly

Key word: Arterio-venous fistula, intimal hyperplasia, mesenchymal stem cells

Optimization of Arteriovenous Fistula Modeling in Local Rabbit (Analysis of Intimal Hyperplasia)

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Introduction: Nearly 50% of AVFs can never be used for hemodialysis and if they do, 25% will fail after 2 years. The pathophysiology of intimal hyperplasia in AVF for hemodialysis access is complex, with many influencing factors such as turbulent flow, size mismatch between anastomotic arteries and veins, and vascular injury due to AVF surgery itself and repeated cannulation.

Methods: This research is a preliminary study, where AVF modeling will be made in Rats Rattus novergicus strain Wistar and analyze the incidence of intima hyperplasia. When is the fastest and longest time for the occurrence of intimal hyperplasia in veins that have been carried out by AVF. Where later it can be predicted whether the AVF operation that has been done can be used as a vascular access for hemodialysis or not within 6-8 weeks after AVF surgery. The method used is an experimental laboratory study, with a post test design approach (experimental laboratory post test only group design) that uses experimental animals as research objects. The research group was divided into 3, namely the KN group as a negative control group, rats without any treatment. The P1 group as the positive control group, where the AVF model mice were terminated at week 2. The P2 group was the positive control group, where the AVF model mice were terminated at week 6

Conclusion: This research is still ongoing and in the process of carrying out it was found that the arteries and veins of rats were very small and not strong enough for AVF to be performed. Fortunately the researchers replaced the experimental animals with rabbits that had larger blood vessel anatomy. The complete research results will be reported again afterward all research methodologies are carried out perfectly

Key word: Preliminary study, arterio-venous fistula, intimal hyperplasia,

Effectivity of Arabica Gayo Coffee Skin in Repairing Collagen Damaged by UVB Exposure

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Introduction: Prolonged exposure to UV rays from the sun can cause skin aging. Produced through inhibition of collagen production so that it can make skin collagen decrease due to increase oxidative stress. However, oxidative stress can return to normal due to the help of antioxidant compounds. Antioxidant derived

from plants, such as coffee. The side effect of coffee processing will produce large amount of waste. However, the waste can still be processed because there are still many good compounds contained and can be used for the utilized in dermatology. This research aims to assess the benefits of topical *cascara pulp* arabica coffee extract cream on the number of collagen fibers thickness and density of wistar rats (*Rattus norvegicus*) as treatment for photoaging.

Method: There are 5 groups (negative control (PN), positive control (PP), and treatment group with 5% concentration (P1), 7,5 concentration (P2), and 10% concentration (P3)) and each group contain 6 male wistar rats (*Rattus norvegicus*). Total dose of 840 mJ/cm² of UVB was given to each group for 4 weeks. Collagen fiber thickness and density was assessed from skin biopsy of the rats.

Result: significant difference ($p > 0,005$) was observed in the thickness and density of collagen fiber of the treatment group.

Conclusion: cascara pulp Gayo arabica coffee extract cream that applied topically can prevent the degradation of collagen through increasing collagen fiber thickness and density.

Key words: cascara, arabica Gayo Coffee, aging, Coffee by product