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Severe foreskin adhesion and meatal stenosis – complications after Circumcision: A Case Report



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ABSTRACT

Introduction: Although circumcision is the most common surgical surgery performed on newborn males, problems can still occur regardless of the technique utilized by the operator.

Case description: This case report aims to highlight the case of a 13-year-old boy who presented with severe foreskin adhesion and meatal stenosis after circumcision and underwent surgical reconstruction. During surgery, the foreskin firmly bonds to the glans and cannot be scraped away. Even the glans penis is injured when released abruptly. The glans penis was then clearly visible and could be distinguished between the skin and glans penis after a circumferential incision was performed on the penis skin above the coronary sulcus. Adhesiolysis was then conducted from the proximal to the distal wound. After that, the meatoplasty was performed.

Conclusion: Since issues related to complications of circumcision continue to emerge, it is important to have a proper understanding of the circumcision procedure and how to manage the complication. To our knowledge, this is the new insight into managing severe foreskin adhesion with a good outcome.

Keywords: foreskin adhesion, meatal stenosis, complication, circumcision.

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INTRODUCTION

Male circumcision (MC) is the most frequently performed surgical procedure. Currently, MC is performed for social, cultural, and religious indications and often also for medical indications.¹ In Indonesia and other Muslim-majority countries, MC procedures are usually performed on all children and adolescents based on social and religious indications. Although several MC procedures are performed on patients with phimosis and any other pathological condition of the penile skin, including aesthetic reasons.²

Usually, the MC procedure is carried out by experienced medical staff. Even though this procedure is included in a minor surgical procedure, various studies have reported benefits of MC, such as; preventing urinary tract infection, penile cancer, and HIV transmission.³⁻⁵ However, some complications can be found, such as; bleeding, infection, and urethral damage, such as meatal stenosis, penile strangulation, skin necrosis, lacerations, and phimosis after circumcision.¹

Herein, we report one case of severe foreskin adhesion and meatal stenosis after circumcision. Not only describing post-circumcision complications, this case specifically contributes to documenting post-circumcision complications and how to manage them.

CASE DESCRIPTION

After undergoing circumcision, a 13-year-old boy complained of difficulty urinating and foreskin adhesion to the glans. On presentation, the patient had meatal

stenosis and phimosis after circumcision (Figure 1). From the previous medical history, the patient had no history of urinary disorders but complained of swelling of prepuce while urinating. There is no known prior circumcision procedure.

The patient was then scheduled to undergo reconstruction of the meatal stenosis and re-circumcision to separate the adhesions between the glans penis and the foreskin. The foreskin becomes strongly attached to the glans during the procedure and cannot be removed bluntly. When released abruptly, it even

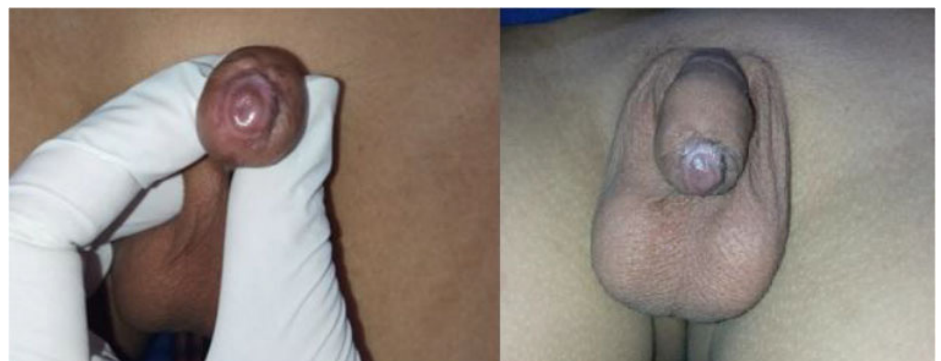


Figure 1. Severe foreskin adhesion and meatal stenotic was seen at the first presentation.



Figure 2. Wound condition at 2 days post-operative.

injures the glans penis. We then made a circumferential incision on the skin of the penis just above the coronary sulcus. After the glans penis can be identified and separated between the skin and the glans penis, adhesiolysis continues from proximal to distal.

A well-lubricated mosquito haemostat with one jaw is then inserted into the ventral portion of the urethral meatus to a depth of around 2-3 mm to execute a meatoplasty. The haemostat is then closed, crushing the ventral tissue. The inner urethral mucosa and glandular tissue are reapproximated with 5-0 Vicryl sutures in an interrupted pattern, and the crushed ventral tissue is incised severely with scissors.

The patient was discharged after 2 days of postoperative with open wound care (Figure 2). At 1 month of evaluation, the appearance was normal, there was no impaired wound healing, and the urethral meatus was not re-stenotic (Figure 3). Urinating was normal, and no symptoms were present.

DISCUSSION

Although male circumcision is usually performed by experienced professional medical personnel, it can also be performed by untrained people without medical licenses in some countries.^{1,6} The majority of post-circumcision complications are



Figure 3. The glans penis was visible until the sulcus coronarius with the urethral meatus looked without re-stenotic and good wound healing at 1 month of evaluation.

known to be caused by a number of factors that are directly linked to complications, including the age at circumcision, the provider's training and experience, the sterility of the environment in which the procedure is performed, and the indication (medical or cultural) for circumcision. Additionally, there is diversity because of methodological problems such as follow-up time, epidemiological study design, and complication definition.⁷

In this case report, the prepuce was not released and separated until the coronary sulcus. This condition will cause inflammation and worsen the foreskin and glans penis adhesions. Although most cases of foreskin adhesions can lysis spontaneously because the penis grows, erections become more frequent and firmer. On the other hand, lysis of the foreskin adhesions can also be done gently by pushing away the adhesions after topical aesthetic administration.⁸

However, about 30% of late complications reported by the Massachusetts Hospital group experience severe adhesions and thick skin bridges requiring surgical intervention.⁵ Surprisingly, in our case, severe adhesion resulted in the condition of the glans being injured during adhesiolysis. So, we decided to do the adhesion with a circumferential skin incision just above the coronary sulcus with the consideration that there is no scar and the tissue in that location is still fresh, this makes it easier for us to identify the foreskin and glans. We then

continued to apply the adhesion distally until a blunt and sharp removed the part with severe adhesion.⁹

To our knowledge, this technique has a good postoperative result. Although this procedure is still not widely applied in cases of severe foreskin adhesions and still requires further evaluation. In our opinion, this procedure can be an alternative for physicians in managing foreskin adhesions that require surgical intervention.

CONCLUSION

It is important to be informed of the circumcision procedure properly since complications related to circumcision continue to emerge. There is a need to increase the safety of male circumcision through better training or retraining for both conventional and medically educated clinicians, as well as by ensuring that providers have enough of the tools and materials to reduce the complication rate.

DISCLOSURES

Consent for publication

Written informed consent was obtained from the patient to publish the patient's images and this case report.

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Conflict of interest

No conflict of interest was disclosed.

Author contributions

SAK were involved in drafting and editing the manuscript and patient care. JI was involved in supervising the manuscript. All authors read and approved the final manuscript.

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