



Case Report

Secondary Phimosis: A Rare Complication of Circumcision

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ABSTRACT

Secondary phimosis is a rare complication following circumcision that results from dense adhesion of redundant foreskin with glans. Multiple issues, such as the performer of the procedure, the method of anaesthesia used, and the patient's age, are contributory factors for secondary phimosis. Here we reported a case of secondary phimosis presented with acute retention of urine and UTI. Revision circumcision was done as an elective case, and the outcome was satisfactory.

Keywords: Secondary phimosis, Circumcision, Complication.

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INTRODUCTION

Circumcision is the most frequently performed elective procedure in males. Approximately one in three men is circumcised globally^{1,2}. It is widely practiced for religious purposes^{3,4}. In Bangladesh, circumcisions are commonly performed at home during collective circumcision rites by traditional practitioners; this often leads to complications. Most complications are minor, but major complications could occur. Common complications are bleeding, haematoma, infections, injury to the glans, inadequate circumcision, and meatal stenosis. Rare complications are secondary chordee, secondary phimosis, urethro-cutaneous fistula, and amputation of penis^{5,6}. Secondary phimosis, also called “iatrogenic phimosis” or “post circumcision phimosis” is a rare complication of circumcision and accounts for 2% of the cases⁷. The cause of secondary phimosis is inadequate removal of the inner skin of the prepuce or inadequate circumcision,

resulting in a fibrotic ring around the glans within 3 weeks⁷. Secondary phimosis presents with cosmetically ugly looking genitalia and urinary symptoms. The majority of them need revision surgery, and re-do circumcision is the treatment of choice⁷.

CASE REPORT

A 10-month-old boy presented with retention of urine for 12 hours, difficulty of micturition in the form of poor flow, and crying during micturition for one month. According to history, the patient was circumcised 2 months ago for religious purposes at home by a traditional circumciser (Hazam). After circumcision, the penis became swollen and the glans was partially covered with skin, but there was no problem with micturition. The patient was treated with antibiotics and analgesics by a local physician for pain and swelling. A few days later, parents observed that the swelling reduced but the skin over glans progressively lengthening and covering the meatal opening. On examination, the patient was irritable with a high-grade fever. Urinary bladder was full, penis looked amputated at our first impression, and both hemi-scrotum and testes were

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normal. During the examination, the patient passed urine through the meatal opening. Preputial skin failed to retract due to dense adhesion with glans (Figure-1). The patient was diagnosed with secondary phimosis and prepared for re-do circumcision under general anaesthesia. Circumcision was done using the dorsal slit technique, where preputio-glandular adhesion was lysed manually and the inner layer of the prepuce was trimmed, leaving about a 5 mm margin around the corona. Then interrupted stitches were applied with absorbable suture (Figure-2). The postoperative period was uneventful, and the patient was discharged 2 days later with open wound care. After one month, appearance of penis and meatal opening was normal. No symptom related to micturition was present.

DISCUSSION

Phimosis is the inability to retract the prepuce or foreskin in a non-circumcised male. Foreskin is the anatomical covering of glans penis. It serves many functions, including protective, erogenous, and immunologic. At birth, the inner surface of the foreskin becomes densely fused with the epithelium

well as ballooning during micturition. Treatment of pathological phimosis is circumcised excision of foreskin at the level of corona-glandis, known as circumcision^{5,6}. Sometime, glans is re-covered with redundant foreskin following circumcision. This condition is known as secondary phimosis. Various factors are responsible for secondary phimosis. According to literature, secondary phimosis is commonly seen after "Plastibell" circumcision due to slipping of the inner skin because of loose ligature or using a small size ring, resulting in a fibrotic ring around the glans⁹. Such complications may occur with other device procedures or freehand techniques, as in our case. Timing of circumcision is another contributory factor for secondary phimosis. Like our case, most of the secondary phimosis resulted from circumcisions in males aged less than one year⁷. This finding may be attributed to the fact that the inner layer of foreskin becomes separate and easily retractable after 3 years of age. This separation makes the estimation of foreskin excision more accurate, thereby preventing complication. An anatomical detail such as thick pubic fat and buried



Figure-1: Pre-operative picture.



Figure-2: Post-operative picture.

of the glans and is retractable in only 5% of neonates. As the child grows, excessive keratinizations of the inner epithelium, spontaneous erections, or natural manipulations cause separation of two surfaces, which is 60% at the age of 11 to 15 years⁵. Inability to retract the foreskin of a child without interference of micturition is called physiological phimosis. Physiological phimosis is common up to 3 years of age and may extend into the older age group⁸. True or pathological phimosis is associated with a white, scarred preputial orifice, which causes difficulty as

penis is also a risk factor for secondary phimosis. Excessive removal of skin from the penile shaft along with prominent suprapubic pad of fat leads to healing within the fat pad and ultimately progressive closure and stricture of the skin over the glans⁸. Performer, environment of procedure, and anaesthesia are also important causative factors for secondary phimosis^{4,7,10,11}. If performers have no idea about the anatomy of the penis and surgery done in an inappropriate setting using inadequate anaesthesia, the chance of complication will be more.

Our case was circumcised at home by a traditional circumciser (Hazam).

Patient with secondary phimosis a matter of parental anxiety due to cosmetic issue and urinary symptoms. In all cases, glans were covered with skin, partially or completely. Urinary symptoms are urinary tract infections, dysuria, and rarely retention of urine. Our patient presented with UTI and urinary retention. Similar findings were described by other authors^{12,13}. Diagnosis is done by taking history and physical examination. After diagnosis, the patient should be admitted and take measures for acute symptoms like retention of urine. Revision surgery, or re-do circumcision under general anaesthesia on an elective list, is the treatment of secondary phimosis^{4,7,9,10,12}.

CONCLUSION

Although circumcision is a common surgical procedure, complications may occur, ranging from the insignificant to the tragic. These complications can be minimised by performing this surgery with an expert hand at an appropriate place using appropriate anaesthesia. If there are no medical or religious issues, circumcision of a boy completing 3 years may also reduce the chance of secondary phimosis.

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