CASE REPORT

Paraphimosis in Circumcised Old Man

Akhada Maulana*[1], Mohammad Ilham Akbar[2]

[1]Division of Urology/Department of Surgery, Medical Faculty/Mataram University, West Nusa Tenggara Province General Hospital, Mataram
[2]General Practitioner in Namira Islamic Hospital, East Lombok
Coresponding Author
*akhada_m@hotmail.com

ABSTRACT

Introduction: Paraphimosis is an emergency uncommon condition in which penile foreskin retracted to proximal and cannot be returned to its normal anatomic position.This condition occurs when the uncircumcised or partial circumcised male penis retracted for an extended period of time. In Indonesia, many men had been circumcised in the past not by doctor nor nurse, but traditional physician. They performed partial circumcision, so there was still foreskin covers part of glans penis that can cause paraphimosis.

Method: We report one case, partial circumcised 60 years old man, came to Namira Islamic Hospital with complained swelling and pain on his penis since a night before. Before that, he pulled his penile foreskin backward. Then the foreskin made constriction band of tissue on the middle of his penile body. He went to nearby clinic and then referred to Namira Islamic hospital, East Lombok, and diagnosed as paraphimosis. We performed emergency surgery later.

Results: We found constriction band of tissue on his middle part of his penile body. Distal part of constriction ring became swelling, and skin color became dark purple. Then we performed dorsal slit procedure continued with circumcision. After procedure, penis color became normal.

Discussion: Paraphimosis most often happens in boys and older man. It is still can happen on partial circumcised man, because there is foreskin extent, which could become risk factor of paraphimosis. Treatment of paraphimosis is dorsal slit procedure with or without circumcision.

Keywords: paraphimosis, dorsal slit procedure, circumcision

Introduction

Paraphimosis is a true urologic emergency that occurs in uncircumcised males when the foreskin becomes trapped behind the corona of the glans penis, leading to strangulation of the glans as well as painful vascular compromise, distal venous engorgement, edema, and even glans penis necrosis.[1,2]

Etiology Paraphimosis commonly occurs iatrogenically, when the foreskin is retracted for cleaning, placement of a urinary catheter, a procedure such as a cystoscopy, or for penile examination.1 Failure to return the retracted foreskin over the glans promptly after the initial retraction can lead to paraphimosis. Other less common causes include penile coital trauma and self-inflicted injuries[3]

Paraphimosis occurs most frequently from preputial edema caused by genital trauma, such as preputial laceration, penile hematoma, or castration. Paraphimosis may be a manifestation of disease characterized by extensive edema, such as dourine and purpura hemorrhagica or it may be caused by damage to penile innervation. The last has been associated with spinal disease, trauma, and infectious diseases, such as equine herpes-virus 1 and rabies. Paralysis associated with priapism, debilitation, or exhaustion has been reported too[3,4]

Epidemiology of paraphimosis in males who do not circumcision or incomplete

circumcision, can occurs at any age, most commonly in adolescents. Paraphimosis occurs in 0.7% of boys uncircumcised. Approximately 1-5% of men will experience paraphimosis before the age of 16 year.[5]

Pathophysiology of paraphimosis is when a constricting band of the foreskin allowed to remain retracted behind the glans penis for a prolonged period, it can lead to impairment of distal venous and lymphatic drainage as well as decreased arterial blood flow to the glans. Arterial blood flow can become affected over the course of hours to days. This change can ultimately lead to marked ischemia and potential necrosis of the glans.[1,7]

When evaluating a patient with paraphimosis, doctor must explore history of any recent penile catheterizations, instrumentation, cleaning, or other procedures. The patient should be asked about his routine cleaning of the penis too. It is also important to ask if the patient is circumcised or uncircumcised. It is still possible to develop paraphimosis in a patient who has previously been circumcised.[7]

Symptoms of paraphimosis include erythema, pain, and swelling of foreskin and glans penis due to the constricting ring of the foreskin. Sometimes patients describes as "penile swelling" and may be relatively painless. Diagnosis is made clinically by direct visualization on physical examination, as well as the inability to easily reduce the retracted foreskin manually.[7]

Treatment of the mild uncomplicated paraphimosis may be reduced manually, usually without sedation or analgesia. Local anesthesia needed in more difficult or complicated cases.[5]

Manual reduction of the paraphimosis is possible with or without compression methods, using osmotic agents and puncture-aspiration techniques. Manual pressure may reduce edema. A gloved hand is circled around the distal penis to apply circumferential pressure and disperse the edema. Ice packs are also useful in reducing swelling of the penis and prepuce. Penis is first wrapped in plastic, with ice packs applied intermittently until the swelling subsides.[5]

If conservative treatment failed to make paraphimosis back to normal, an emergency dorsal slit procedure should be performed. This procedure should be performed with the use of a local or general anesthetic.[5]

Circumcision is strongly recommended in all patients who have had a significant paraphimosis due to the very great risk of a recurrence.10

Failure to remove the constricting band of paraphimosis will result in necrosis of the glans.[11]

Method

A case circumcised 60 years old man, complained swelling and pain on his penis since a night before admitted to Namira Islamic Hospital, East Lombok. On physical examination, we found there was constriction band of tissue at the middle of his penile body. The glans penis and distal part of penile body became swelling. We diagnosed this patient as paraphimosis. Then we performed emergency surgery, which were dorsal slit incision and circumcision procedure. There was no problem intra operative and post-operatively. Patient discharged on the 2nd day after surgery.

Results

The night before, this patient complained couldn't urinate and pulled his penile foreskin inward. Then the distal foreskin trapped in the middle of penile body and made constricting band of tissue that clamped his penis. Distal part of the band on his penile body

and glans penis became swelling. He felt pain on his penis too. Then he went to clinic nearby, and was inserted with catheter, then referred Namira Islamic Hospital, East Lombok.

On physical examination, 16 hours after symptom started, general condition was good and patient looked pain. The vital sign was normal, so the general status of his body too. On penis examination, we found constricting band of tissue on middle of penile body. There was edema on glans penis and distal part of penile body. There was pain on palpation too.

On 21 hours after symptom started, we found the color of distal part of constriction band became dark purple. Laboratory examination was normal.

Then we performed dorsal slit procedure under spinal anesthesia. Intra operative we performed longitudinal incision on constriction band at dorsal, left and right part. We tried to pull the foreskin forward, but the edema of penile gland and distal part of the foreskin made it difficult. So we aspirated edema fluid and venous blood from the distal foreskin and glans penis using 10 cc syringe. There was black venous blood flew out of glans penis. After the edema of penile gland and distal foreskin relieved, we can pull the distal foreskin back to normal position. It appeared that the patient was partially circumcised. Then we performed longitudinal incision on constriction band, at 3, 9, and 12 o'clock, continued by circumcision to avoid the recurrence.

After surgery, the color of penile gland became reddish and distal part of penile body became brown, same color skin as proximal part. Patient then was cared in hospital for 3 days and had given intravenous ceftriaxone injection 1 gr daily and ketorolac injection 2 times daily. He was discharged from hospital with indwelling catheter in good condition.

Discussion

Paraphimosis can occur on partially circumcised patient1,3, because there is still rest of foreskin that covered part of gland penis. Sometimes it covered more than half of gland penis. That is not uncommon occurred in Indonesia, especially on elder patient in rural area, caused they were circumcised not by doctor or nurse but traditional physician. They cut foreskin shortly, reversed backward, just to make penile gland open. So there was still foreskin left that sometimes could become risk factor of paraphimosis.

In this case, patient age was 60 years old and lived in rural area. His penis was partially circumcised, and the preputial skin covered one third of his penile gland. When he pulled the foreskin backward and didn't return it to normal position, then paraphimosis occurred, because this rest of foreskin made constriction band of tissue at his penile body.

Prevalence of paraphimosis in uncircumcised children, four months to 12 years old, with foreskin problems, is 0.2%. It is less common than other penile disorders such as balanitis (5.9%), irritation (3.6%), penile adhesions (1.5%), or phimosis (2.6%)[5]

In adults, paraphimosis is most commonly found in adolescents. It will occur in about 1% of all adult males over 16 years of age.5 In other report said that paraphimosis occurred more often in boys and older men, but actual number wasn't shown up.4 So it's not surprisingly in this case, paraphimosis occurred in 60 years old man. Sandip EJ and Sujata SJ reported 52 % of paraphimosis case in their research were 21 – 60 years old and 2 % more than 61 years old.[8]

Paraphimosis is almost always an iatrogenically or inadvertently induced

condition; however, case reports have described paraphimosis occurred at sexual intercourse case, as well as penile piercings, and masturbation leading to paraphimosis.1,8 Predisposing events on boys are retraction by self and by mother.8 In most cases, the foreskin reduces on its own and therefore precludes paraphimosis; however, if the slightest resistance to retraction of the prepuce is present, leaving it in this state predisposes it to paraphimosis. As edema accumulates, the condition worsens.[1]

If a constricting band of the foreskin is allowed to remain retracted behind the glans penis for a prolonged period, it can lead to impairment of distal venous and lymphatic drainage as well as decreased arterial blood flow to the glans. Arterial blood flow can become affected over the course of hours to days. This change can ultimately lead to marked ischemia and potential necrosis of the glans.5

In this case paraphimosis occurred when patient pulled his penile foreskin backward, then the foreskin trapped at the middle of his penile body, because he didn't return it to normal condition. He did that after suddenly he couldn't urinated and expected could urinated again if he pulled his penile foreskin. Then he felt pain and swelling on his penis, especially at distal part of penile body and glans penis.

This condition as same as the majority of paraphimosis cases. In other research reported that on paraphimosis physical examination found that the glans penis is enlarged and congested with a collar of edematous foreskin. A constricting band of tissue is noted directly behind the head of the penis. The remainder of the penile shaft is unremarkable.1

Treatment of paraphimosis is to control pain first, by providing adequate analgesia and local anesthesia using a dorsal penile nerve block and circumferential penile ring block with lidocaine, bupivicaine, or a combination of the two.1

In this case, patient felt very pain, especially when we touched or palpated his penis. We gave intra venous ketorolac injection to reduce the pain and inflammation. We also gave 1 gr ceftriaxone injection to prevent infection.

Actually, once pain control is adequate, manual reduction by attempting to circumferentially compress the foreskin and holding for 2-10 minutes to "squeeze" the edematous fluid along the penile shaft may be attempted.1,5 We didn't perform manual reduction in this case because the edema was big and he felt pain when we touched his penis. So we directly performed emergency surgery under spinal anesthesia. Intra operatively we attempted to perform manual reduction, but the foreskin edema made it difficult. So, we aspirated the foreskin but only minimal fluid came out there. Then when continued aspirating glans penis, with 10 cc syringe. Black venous blood flew out of glans penis. After the edema reduced, then we performed dorsal slit incision and circumcision. Then the glans penis color became reddish which means that the blood flow in penis became normal.

If paraphimosis is left untreated for too long, the distal portion of the penis can become ischemic and even necrotic. Partial amputation of the distal penis has been reported.1

After patient discharged from hospital, he checked again in urology clinic at day 7th. The color of his glans penis and penile body was normal and the wound was good. No complain of pain anymore. Patient still used urethral catheter, and we plan to perform urology ultrasound to find the cause of urinary retention.

Paraphimosis does not recur after a proper circumcision. Outcome after a dorsal slit procedure or a circumcision is excellent. Sometimes, patients with a favorable outcome from dorsal slit procedures decline circumcision.1

REFERENCES

1. Bradley NB, Erwin LK, Stephen WL. Paraphimosis. StatPearls Publishing in http://ncbi.nlm.nih.gov/books, August 2021. European Association of Urology 2018.
2. C. Radmayr (Chair) et all. Paraphimosis in EAU Guidelines On Pediatric Urology Paraphimosis. Nathan AB, James AB. Paraphimosis in www.emedicine.medscape.com. Last update March 15 2021.
3. Anonym. Tight foreskin (phimosis and paraphimosis) in https://www.nhs.uk/conditions/phimosis. Last update July 26 2018.
4. Matthew Tews, Jonathan IS. Paraphimosis: Clinical manifestations, diagnosis, and treatment in https://www.uptodate.com/contents/paraphimosis-clinical-manifestations-diagnosis-and-treatment/. Last update : May 01 2020.
5. Kelly L. Stratton. Paraphimosis in https://medlineplus.gov/ency/article/001281.htm. Last update : January 10 2021.
6.
7. James Schumacher, Penis and Prepuce in Jorg A. Auer et al (eds.) Equine Surgery Fifth Edition, 2019.
8. Sandip EJ, Sujata SJ. Clinical Study of Proportion of Predisposing Events and Cause of Paraphimosis. Indian J of Applied Research, Vol 3 : 11, Nov 2013.
9. Christopher K. Reduction Technique for Paraphimosis. CDK-258 / vol. 44 no. 11, 2017.
10. Sato Y, Takagi S, Uchida K, Shima M, Tobe M, Haga K, Honama I, Hirobe M. Long-term follow-up of penile glans necrosis due to paraphimosis. IJU Case Rep. 2019 Jul;2(4):171-173.
11. Dr Laurence Knott, Reviewed by Dr Sarah Jarvis MBE. Phimosis and Paraphimosis. Last edited 20 Jun 2019 Meets Patient's editorial guidelines