

Case Report

Management of Iatrogenic Paraphimosis at Fousseyni Daou Hospital, Kayes: A Clinical Case

Diakit  A. S^{1*}, Kouyat  M², Sogoba G³, Sangare S³, Traore L. I³, Traore O.B⁴, Djerma M⁴¹Urology Unit, Fousseyni DAOU Hospital, Kayes, Mali²Pediatric Surgery Unit, Fousseyni DAOU Hospital, Kayes, Mali³General Surgery Unit, Fousseyni DAOU Hospital, Kayes, Mali⁴Trauma Surgery Unit, Fousseyni DAOU Hospital, Kayes, Mali

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Abstract: The word paraphimosis is derived from two Greek words: "para" (meaning "beyond" or "resembling") and "phimosis" (meaning "to muzzle" or "to restrict"). It is a true urological emergency. [1, 2]. We report a case of iatrogenic paraphimosis after urinary catheterization and review the literature. This is a 2-year-old male patient who presented to the urology department with plaintive cries, painful penile swelling, fever, and vomiting after transurethral catheterization for acute urinary retention. Physical examination revealed a retracted foreskin behind the corona of the glans with swollen and edematous preputial mucosa. He also had a fever of 38.2 C. Paraphimosis is a rare urological emergency. In 15 years of urological practice, we have recorded only one case. Burstein and Paquin, from Canada, reported 46 patients between October 2013 and September 2016 [18]. If left untreated, it can lead to catastrophic penile lesions. The treatment was surgery. It is important to return the foreskin to its original position after urethral catheterization or cystoscopy.

Keywords: Iatrogenic, Clinical Case, para, penile swelling, fever.

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INTRODUCTION

The first mention of paraphimosis is found in the Sushruta Samhita, an ancient Hindu surgical text written around 1200 BC [7]. The Sanskrit name for paraphimosis was then Avapatika.

The word paraphimosis is derived from two Greek words: "para" (meaning "beyond" or "resembling") and "phimosis" (meaning "to muzzle" or "restriction"). It is sometimes also written "paraphymosis," as the Greek word phyma (meaning swelling) refers to the preputial swelling characteristic of this condition [1, 2].

Paraphimosis is a true urological emergency that occurs when the foreskin is trapped behind the corona of the glans. Foreskin retraction in an uncircumcised male is an initial event that, if left untreated, can have serious consequences such as edema, severe pain, distal venous congestion, and even necrosis [1,2]. In cases of suspected paraphimosis, any attempt without adequate analgesia and sedation is doomed to failure, and additional investigations or treatments can make the procedure very difficult [2].

We report a case of iatrogenic paraphimosis after urinary catheterization and review the literature.

PATIENT AND OBSERVATION

This is a 2-year-old patient who presented to the urology department with whining, painful penile swelling, fever, and vomiting. The father's history revealed dysuria in the child, with whining, prompting a visit to the emergency department, where a urinary catheter was inserted. It turns out that the health worker forgot to re-seal the glans, leaving the child home. He reportedly spent the entire night crying. The next day, his father came to the urology department with his child, confused as to what was happening.

On physical examination, the diagnosis was clear. The patient was still wearing a urinary catheter, with a foreskin retracted behind the corona of the glans, and a swollen and edematous preputial mucosa. He also had a fever of 38.2 C.

No attempt at manual reduction was made. Emergency surgery was performed under gas sedation and consisted of an incision on the dorsal surface of the penis to release the constriction created by the foreskin ring and then a posthectomy. The patient was discharged

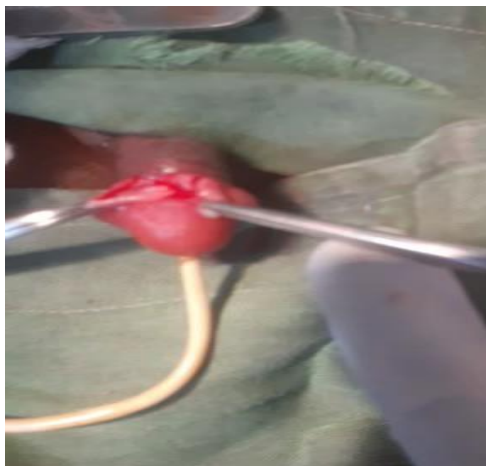
from the hospital on postoperative day 1 under cover of antibiotics and oral anti-inflammatory drugs. The postoperative course was uneventful.



Paraphimosis seen from the front



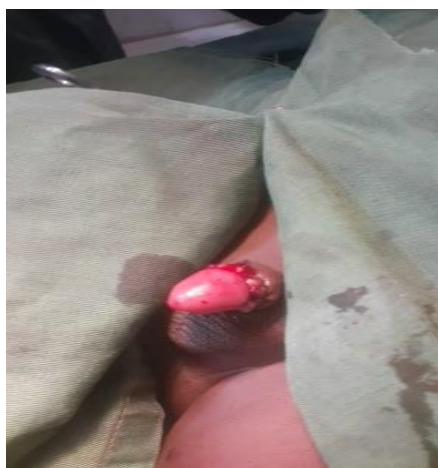
Paraphimosis seen from the side



a- Dorsal incision to release the preputial ring



b- posthectomy according to



c- result after posthectomy



d- surgical wound dressing

DISCUSSION

Paraphimosis is a rare urological emergency. It should be remembered that in Mali, circumcision is widely practiced, starting in the first weeks of life. It could therefore be argued that this approach among the population would reduce the risk of phimosis and

therefore eliminate the occurrence of paraphimosis. In 15 years of urological practice at a regional hospital in Kayes, we have noted only one case of paraphimosis.

This assertion has been contradicted by Cletsoway RW *et al.*, who argue that paraphimosis defies

this simple logic. Large numbers of cases have been reported in the United States [14] and in Muslim countries such as Pakistan [16].

Burstein and Paquin, from Canada, reported 46 patients between October 2013 and September 2016 [18]. They cite an annual attendance of 84,000 patients in their emergency department. Thus, the calculated incidence of paraphimosis is 1 in 5,400 emergency department admissions.

Etiopathology of paraphimosis.

According to Raveenthiran V, compound paraphimosis occurs in a stenotic scarred preputial orifice, and penile erection is therefore a prerequisite for its development [10].

Penetrative sexual intercourse [21, 22] and masturbation [23] are responsible for the majority of compound paraphimosis. Lichen sclerosis of the foreskin predisposes to paraphimosis by causing phimosis [26].

And simple paraphimosis, when the soft foreskin is retracted and carelessly left at the coronal sulcus for an extended period [10].

Iatrogenic factors, including penile examination, urethral catheterization, or cystoscopy. It frequently occurs iatrogenically, when the foreskin is retracted [4]. The typical clinical picture is that after inserting a Foley catheter, the healthcare professional forgets to return the retracted foreskin to its original position [5]. This is the case observed in our presentation; it is simple paraphimosis. This type is extremely rare and represents only 5% of paraphimosis.

Clinical Features

The most common symptoms of paraphimosis include penile swelling, penile pain, and an inability to retract the foreskin. Over time, the tip of the penis turns a dark red or blue color. Pain during urination and a decreased urinary stream may also be observed in patients with paraphimosis [1-4]. Once the diagnosis of paraphimosis is made, prompt management is essential to avoid the adverse consequences of tight constriction of the glans. Clifford et al. [1] proposed a guide for the clinical assessment and management of paraphimosis (Fig. 4). The goals of management include reducing penile and glans edema, as well as retraction of the foreskin over the glans to return it to its original anatomical position. Several non-invasive techniques have been proposed for the management of paraphimosis, including manual reduction, pharmacological treatment, including hyaluronidase injection, and the use of granulated sugar [9-12]. Due to the pain experienced during the procedure, penile nerve blockade, topical analgesics, or oral narcotics are often used. The "ice glove" technique has also been proposed as an adjunct to paraphimosis reduction, combining

cooling and compression to reduce penile edema [13]. When these non-invasive measures fail, invasive treatment becomes a necessity rather than a choice. These interventions include the puncture technique using a hypodermic needle to puncture the edematous foreskin, aspiration of blood from the garroted penis, and if all these methods fail to reduce the paraphimosis, an urgent dorsal incision followed by circumcision [14-16]. In order to avoid ischemic changes, after an unsuccessful attempt at manual reduction of the paraphimosis, an urgent dorsal incision with circumcision resolved the problem in our case.

Treatment

Paraphimosis is a clinical diagnosis; therefore, laboratory tests or imaging are unnecessary. For medicolegal reasons, clinical photography may be desirable in patients with ischemic necrosis. Treatment of paraphimosis aims to restore anatomical normality of the foreskin by simple manual reduction; [40] When this is not possible, the foreskin is sacrificed (circumcision) to relieve symptoms.

There are several techniques for the management of paraphimosis.

CONCLUSION

Paraphimosis is a rare urological emergency. It can lead to catastrophic penile injuries, including ischemia and necrosis of the glans penis. It is important to urge healthcare professionals to return the foreskin to its original position after urethral catheterization or cystoscopy. If simple methods of paraphimosis reduction fail, urgent surgery should be performed. Management must be prompt and consistent with guidelines to preserve the viability of the glans penis and shaft.

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