Phimosis in hooded foreskin is a curious presentation in adolescents: case series

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Abstract

Phimosis is a pathological condition in children and is easy to diagnose. In particular cases it can be associated with curious malformations of the foreskin. Four adolescents (aged from 9 to 13 years) presented at our attention because of a phimosis with hooded foreskin. Symptoms complained were: balanitis, urinary infection, preputial urinary retention, or psychological problems. One of the cases was asymptomatic. No other malformations were present. The surgical treatment was to remove the hooded foreskin and treat the ventral part of the skin of the penis to avoid abnormal curvatures. This type of malformation should be recognized and treated even if asymptomatic because it can create psychological problems in adolescence. The surgical treatment must prevent penile curvatures.

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Introduction

Phimosis is a term used to describe difficulty retracting the penile prepuce. There are both physiological and pathologic forms of phimosis, that could mislead the term. The physiological or primary form is common in children between 2 and 4 years of age, is self-limiting, and most of the time resolves once the foreskin becomes more retractile.[1] Secondary phimosis often results a consequence of lichen sclerosis, infection (balanitis) and obesity. Persistent phimosis can result in pain, sexual dysfunctions, increased risk of penile inflammatory conditions, and penile cancer.[2] The most frequent surgical procedure performed for phimosis is circumcision, but some other options of treatment are available.[3] There are several non-surgical alternatives to circumcision, such as retraction therapy, variations of the steroid applications, and finally, systemic antibiotics are recommended in case of balanoposthitis.[4] All these treatments aim to retract the foreskin rather than to remove it entirely. Alternative surgical treatments include several types of prepuceplasty. This term refers to various surgical techniques designed to treat phimosis without radical or partial circumcision. The diagnosis of phimosis is clinical and easy; however, there are more complex cases where the foreskin retraction relates to other conditions of the penis or foreskin, including hidden penis, palmate penis, long foreskin, or hooded foreskin.

In our paediatric surgery department, we identified, from August 2023 to January 2025, 4 patients, aged 9 to 13, with a curious presentation of phimosis with hooded foreskin.

Case Series

Case 1

A 13-year-old adolescent came to our hospital for genital evaluation. The boy experienced significant psychological distress due to his condition, leading him to quit sports activities due to fear of judgment from his classmates. The teenager also reported difficulty in retraction of the foreskin and felt discomfort in showing himself in front of others. On the examination of the genitals, the penis with

phimosis had a very curious appearance (Figure 1). Despite the absence of episodes of balanoposthitis and urinary tract infections, the patient has had investigations (abdominal ultrasound and blood samples) to assess malformations or urological dysfunctions. The tests were negative; therefore, surgery was proposed with prepuce and penile dartosplasty. At the first post-operative check-up, the patient appreciated the aesthetic result (Figure 2). During the check-up six months after surgery, the teenager reported feeling more confident in his body. He had resumed sports activities, was urinating without difficulty, and had rediscovered the pleasure of masturbation.

Case 2

A 13-year-old boy comes to our attention due to repeated episodes of balanoposthitis and urinary retention. He reported social discomfort related to challenges in personal hygiene and the bad smell of underwear. The appearance of the penis was similar to the previous case. Also in this case, the urological investigations were negative, and a surgical procedure was recommended for the treatment of phimosis, as well as preputial hood. At the check-up six months after the surgery, the patient indicated that he no longer experienced difficulties with intimate hygiene, felt uncomfortable in social situations, faced urinary issues, or had discomfort during masturbation. The surgical operation in this case was performed with an incision in the ventral part of the foreskin, just below the orifice, and carried out posteriorly to remove all the "hood" that covered the glans. However, because of a short penile skin in the ventral part it was necessary to perform a transverse incision between penis and scrotum with vertical suture (Figure 3) so as to obtain an elongation of the ventral part of the penis (Figure 4). After the surgery, the patient also reported no episodes of balanitis.

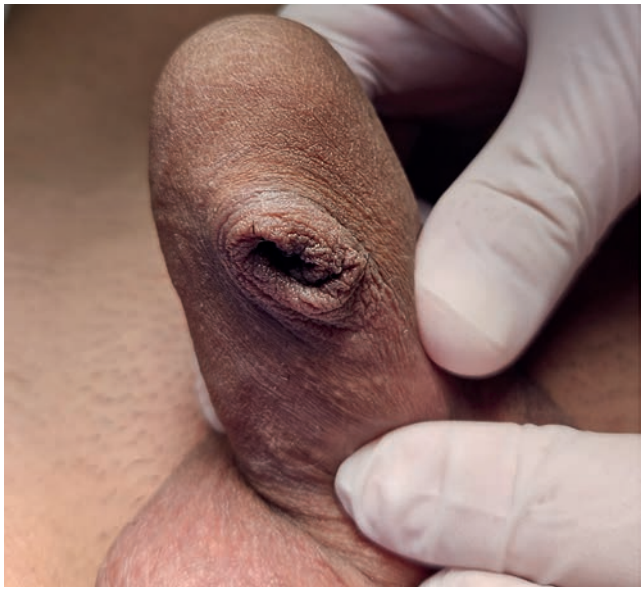

Figure 1. Clinical image of 13-year-old adolescent with phimosis in hooded foreskin

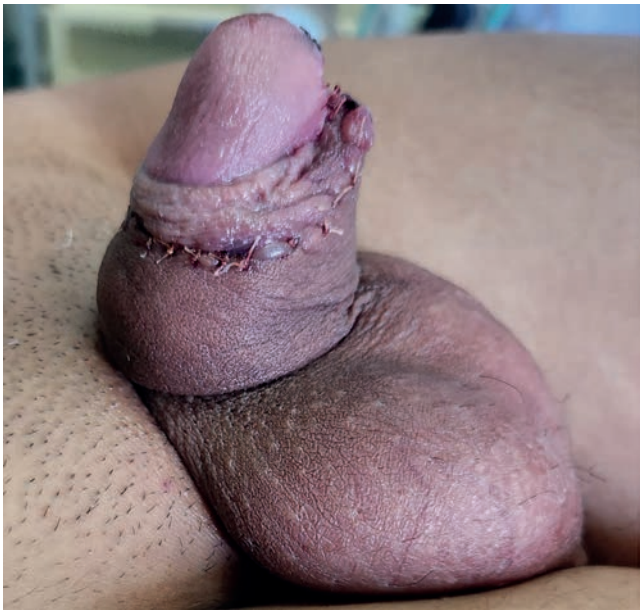

Figure 2. Aesthetic result two weeks after surgery in case one.

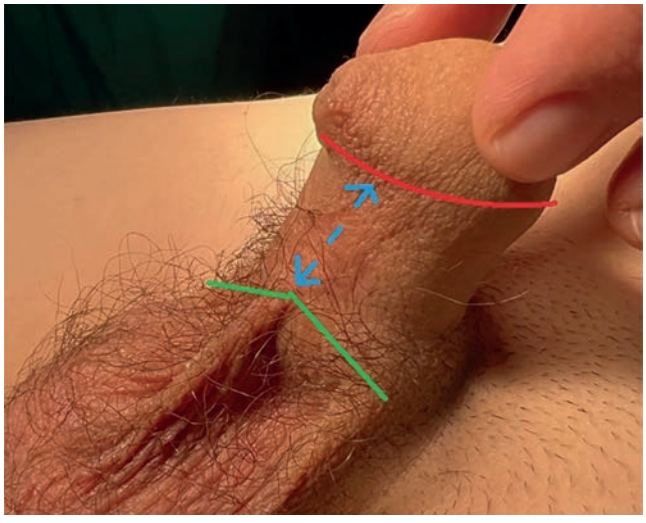

Figure 3. Clinical appearance of the penis of the case two: the red line shows the incision of the foreskin, the green line is the incision between penis and scrotum in order to have a better ventral penis skin (blue line).

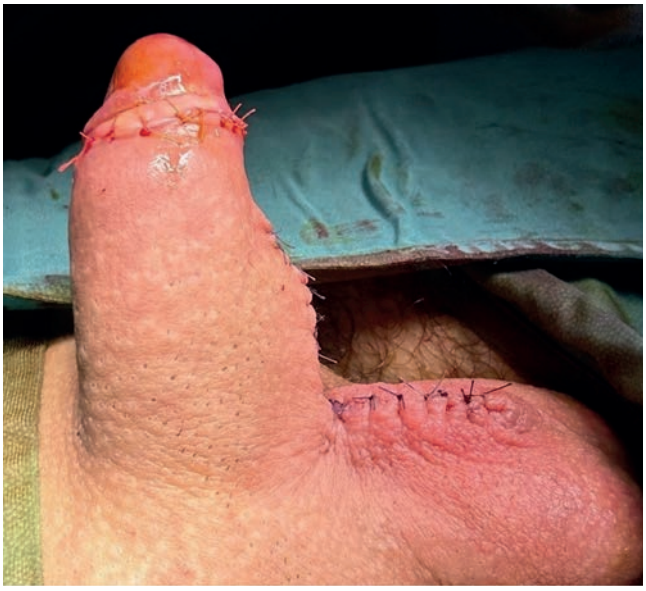

Figure 4. Postoperative result of the case two.

Case 3

An 11-year-old boy has come to our attention because of a recent episode of a urinary tract infection, which was treated at home with oral antibiotic therapy. During the physical examination of the genitals, atypical phimosis with a hooded foreskin and inflammation consistent with balanoposthitis was observed. A local treatment was initially proposed during the outpatient visit. The abdominal ultrasound showed no urological issues or malformations. Once balanoposthitis was resolved, the patient had phimosis with hooded foreskin (Figure 5), and a surgical operation was performed as case 2. At the 6-month follow-up, no new episodes of urinary tract infections were reported, the wounds were well healed, and a satisfactory aesthetic result was achieved.

Case 4

A completely asymptomatic 14-year-old boy comes to our attention for evaluation of his genitals. The mother was worried about the unusual anatomical shape of the child's genitals (Figure 6), compared to her other children, who are aged between 7 and 14 years. He complained that the boy urinated while sitting instead of standing like his brothers and that he avoided urinating outside the house. Following a negative test for urological anomalies and after reassuring the parents regarding their son's condition (phimosis with hooded foreskin), prepuceplasty and dartosplasty surgery was performed as the two previews cases. During the initial post-operative check-up, the wound appeared normal, though slight oedema of the dartos was noted. By the six-month follow-up, the mother indicated there were no issues with micturition.

Discussion

Phimosis is one of the most commonly diagnosed penile disorders in children. There are different forms and severity, such as preputial stenosis, phimosis with a scar, and balanitis xerotica obliterans (penile lichen sclerosis).[5] Sometimes this problem is associated with other malformations of the penis, in fact, it is found in the buried penis or mega prepuce, in some cases, it can even hide a non-serious form of hypospadias.

The authors present this form of phimosis, in which the difficulty of the foreskin's retraction is associated with a rather unusual aspect of the penis; specifically, a hood that covers the glans and leads to significant urine and smegma stagnation.

Finding the correct term for these cases was a challenge despite conducting a thorough literature review. The term "hooded foreskin" is used when the foreskin is ventrally open. It is most commonly observed in conjunction with hypospadias, though it is rarely found without this condition.[6] There are a range of treatment options for hooded foreskin without phimosis: no intervention (since in some cases patients are asymptomatic, it is only a cosmetic defect), prepuceplasty or complete circumcision.

Along with the intriguing presentation, we wish to highlight that the treatment for this phimosis cannot solely involve circumcision or foreskin plasty surgery. In these cases, it is necessary to treat also the ventral part of the penile skin (dartos) to avoid that results an abnormal curvature of the penis, in fact, in our opinion, this malformation affects the foreskin, but also the penis.

The etiology of this preputial anomalous configuration is unknown. Except this anomaly, none of our patients had geni-

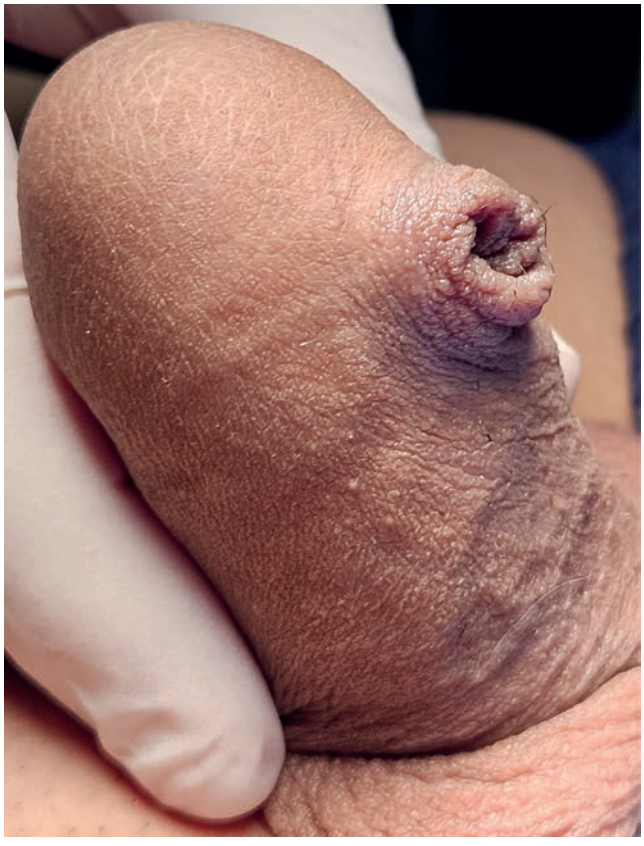

Figure 5. Atypical phimosis with a hooded foreskin in case three.

Figure 6. Anatomical shape of the penis in the case four.

tourinary malformations. This clinical presentation of the genitals likely originates from phimosis caused by an asymmetric foreskin, which is more exuberant dorsally. Regarding the problems complained by patients in our series, there is a lot of variety: infection, preputial urinary retention, psychological problems or nothing.

The human foreskin is highly innervated and vascularized, and it is also a sensitive erogenous zone essential for normal copulatory behaviour.[7] Regardless of the surgical technique used, the goal is to obtain an aesthetic and functional result. The surgical treatment of our patients was dartoplasty, which was chosen to maintain part of the foreskin and prevent a ventral recurvatum. Men with untreated ventral penile curvature expressed greater dissatisfaction with the appearance of their penis, experienced more difficulty during intercourse, and reported a higher number of unhealthy mental days.[8] In our opinion, surgical intervention for this malformation should be recommended even for asymptomatic patients. In fact, at this crucial age of preparation for adulthood, genital self-perception is very important, as noted by some authors.[9]

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