

PHIMOSIS A REVIEW ARTICLE

*Dr. Manoj Patil

Professor, Department of Shalya Tantra, Annasaheb Dange Ayurveda Medical College and Post Graduate Research Centre, Ashta, Tal Walwa, Dist. Sangli, Maharashtra.

Received on: 23/08/2022

Revised on: 13/09/2022

Accepted on: 03/10/2022

*Corresponding Author

Dr. Manoj Patil

Professor, Department of
Shalya Tantra, Annasaheb
Dange Ayurveda Medical
College and Post Graduate
Research Centre, Ashta, Tal
Walwa, Dist. Sangli,
Maharashtra.

ABSTRACT

Phimosis is a term used to describe the difficulty in retracting the prepuce. The term is Greek in origin, with the literal translation of “muzzling.” However, its use interchangeably in several conditions can often lead to the notion of a pathological process where none exists. Often non-retractile foreskin is the presenting complaint of a patient, or their parent/guardian, as such it is best to establish whether the process is physiological or pathological.

KEYWORDS: Phimosis, physiological, phimosis in boys, phimosis in adults.

INTRODUCTION

At birth, the foreskin is normally adherent to the glans penis. These physiological adhesions between the foreskin and the glans penis begin to disappear around the age of 2 years and may persist until 6 years of age or later, giving the false impression that the prepuce will not retract. This condition (sometimes known as physiological phimosis) should not be confused with true phimosis in young boys.^[1]

Prevalence:-There were 13 studies with data for males age ≥ 18 years. In all, 962 of 17,136 men had been diagnosed with phimosis (range 0.5%-13%). A random effects model found risk of phimosis in men was 3.4%.^[5]

Anatomy of Penis

- The penis is composed of three tubular structures. The upper two structures, the corpora cavernosa, provide erectile function and are apposed to each other, being anchored posteriorly onto the pubic rami.^[1]
- The third tubular structure is the corpus spongiosum, which contains the urethra and which expands distally to form the glans penis.
- The corpora cavernosa have an outer covering of tunica albuginea, which is relatively inelastic and which also forms the septum between them. The tunica albuginea encloses the erectile tissue itself, which has a trabecular structure with a network of sinusoidal spaces lined by endothelium within which the blood pools during erection.^[1]

- The central arterial blood supply (the central penile artery) is a branch of the internal pudendal artery.
- Erection occurs when the sacral parasympathetic nerves that innervate the penis cause smooth muscle relaxation with increased arterial inflow and dilatation of the sinusoids such that blood accumulates within the trabecular spaces.^[1]

Phimosis

- Phimosis is defined as the inability to retract the foreskin. Differentiating between physiologic and pathologic phimosis is important, as the former is managed conservatively and the latter requires surgical intervention. Great anxiety exists among patients and parents regarding non-retractile foreskins. Most phimosis referrals seen in pediatric urology clinics are normal physiologically phimotic foreskins. Referrals of patients with physiologic phimosis to urology clinics can create anxiety about the need for surgery among patients and parents, while unnecessarily expanding the waiting list for specialty assessment. Uncircumcised penises require no special care. With normal washing, using soap and water, and gentle retraction during urination and bathing, most foreskins will become retractile over time.^[3]

Phimosis in boys

True phimosis is where there is scarring of the prepuce such that it will not retract without fissuring of the foreskin (. This may result in ballooning of the foreskin

during micturition and may also result in infection (balanoposthitis).

Rarely, the aperture in the prepuce may be so tight as to cause urinary obstruction.



Non-retractile foreskin

Phimosis in adults

Scarring in adults occurs as a result of balanitis (inflammation of the glans penis), posthitis (inflammation of the foreskin), or lichen sclerosus et atrophicus (syn: balanitis xerotica obliterans). BXO(balanitis xerotica obliterans) is an uncommon condition in which the normally pliant foreskin becomes thickened, typically whitish in appearance and forms a

constricting band (cicatrix) that prevents retraction. BXO may also affect the glans penis (causing meatal stenosis) and the penile urethra (causing urethral stricture). As a consequence it is difficult to keep the penis clean, there may be recurrent attacks of balanitis and there is both a problem with hygiene and, in later life, an increased susceptibility to carcinoma.



A.



B.

Phimos is secondary to balanitis xerotica obliterans. Note the white and thickened appearance of the preputial skin (a)

with a constriction such that the foreskin cannot be retracted (b).



Severe balanitis xerotica obliterans causing meatal stenosis, thickened and scarred preputial and penile skin. There was also a severe penile urethral stricture.

Aetiology^[2]

1. CONGENITAL

In these cases the prepuce orifice is narrow since birth. In extreme cases the prepuce balloons out when the patient micturates and a weak thin stream of urine flows.

2. ACQUIRED

(a) Inflammatory.- Phimosis may result from scarring following long standing inflammation of the glans (balanitis) or of the prepuce (posthitis) or a combination of both (balanoposthitis).

3. TRAUMATIC

Occasionally a vigorous trauma to the prepuce may cause prepuce fibrosis resulting narrowing of the opening of the prepuce. This may result also from forceful stretching.

4. NEOPLASTIC

Underlying carcinoma may lead to narrowing of the prepuce orifice. This must be suspected in an old subject who is recently complaining of phimosis.

Clinical features

Age – Congenital phimosis presents in the first few years of life. Acquired phimosis may present later in life according to the cause of phimosis.

SYMPTOMS

- Difficulty in micturition is the main symptom.
- In a case of typical congenital phimosis, the mother complains that when the child micturates the prepuce balloons out and the urine comes out in thin stream.
- In an old case of phimosis, patient may present with recurrent balanitis causing pain and purulent discharge coming out through the prepuce orifice. The condition is also seen in acquired phimosis following recurrent balanoposthitis.
- Occasionally, patient may present with paraphimosis if the tight foreskin gets retracted and stuck behind the
- glans penis. Patient comes with swollen glans penis as the retracted foreskin is causing obstruction to the venous
- outflow leading to oedema and congestion of the glans which in turn make reduction of the prepuce more difficult.

LOCAL EXAMINATION

- Diagnosis is easy. When the opening of the prepuce is so small that it cannot be retracted over the glans penis, it is a case of phimosis.
- In case of adult, one should carefully examine for the infection of the prepuce or glans penis. One must

remember of the presence of carcinoma beneath the prepuce which may result in phimosis.

❖ Complications

(i) Balanoposthitis - which may be recurrent.

(ii) Prepuce stone or calculus:-

- This may occur when the smegma does not get access and is retained
- for years to cause such calculus. Smegma alongwith urinary salts make such calculus.

(iii) Paraphimosis

- Obstruction to the flow of urine may result in residual urine, hydronephrosis and hydronephrosis. In these
- cases one must exclude pin-hole meatus or atresia meati which may lie hidden by the phimosis.

(iv) Carcinoma

- Phimosis itself is an aetiological factor in the development of carcinoma of the penis.
- Muslims and Jews who practise religious circumcision are almost immune to the development of carcinoma of the penis.
- If an old man presents with phimosis, a careful examination must be made to exclude a hidden carcinoma of the prepuce or the glans penis beneath the prepuce sac.

Treatment

Dilation and Stretching

In this, gentle preputial retractions are carried out by a doctor on an outpatient basis. This nonsurgical adhesiolysis is found to be effective, cheap, and safe treatment for phimosis. Eutectic mixture of local anaesthetics (EMLA) could be used prior to attempts at release of the preputial adhesions. He and Zhou used a specially designed patented balloon catheter with local anaesthesia in 512 boys and found it to be 100% useful. The technique was simple, safe, cheap, less painful, and less traumatising than the conventional circumcision. It was found to be more beneficial in younger children with no fibrosis or infection. Combination therapy using stretching and topical steroids has also yielded excellent results.^[4]

Surgical

In a young child with a non-retractile foreskin, no treatment is necessary or appropriate. When the foreskin is mildly scarred, then preputioplasty is possible. For all other cases, circumcision is the appropriate treatment. In cases of BXO, circumcision is often curative, although when the condition affects the glans penis, topical steroid cream may be helpful.^[1] In resistant cases, formal meatotomy is necessary. In emergency situations, such as when catheterisation is required, but is impossible, then

it is possible to divide the foreskin dorsally under local anaesthetic (a so called dorsal slit).^[1]

CONCLUSION

Phimosis needs to be differentiated from non-retractile prepuce, which is the rule in young children. Doctors should be taught on distinguishing these two types of phimosis in order to avoid parental anxiety and needless referrals to urologists for circumcisions. Newer nonsurgical modalities such as topical steroids and adhesiolysis are effective, safe, and cheap for phimosis in children. Parents should be made aware of these measures to treat phimosis. If surgery is indeed needed, conservative plastic surgical techniques should be performed rather than the traditional circumcision.

REFERENCES

1. Bailey H. Bailey and loves Short Practice of surgery. 27th ed. Briraun: CRC: 1932 p1486.
2. Dr. S das, A concise textbook of surgery. 8th ed. kolkata: 2014,p, chapter-
3. Thomas B.McGregor, MD, Jojn G. Pike, MD FRCC, and Michael P. Leonard, MD FRCSC FAAP. pathologic and physiologic phimosis.
4. Shahid SK. Phimosis in children. ISRN Urol., 2012; 2012: 707329. doi: 10.5402/2012/707329. Epub 2012 Mar 5. PMID: 23002427; PMCID: PMC3329654.
5. Morris BJ, Matthews JG, Krieger JN. Prevalence of Phimosis in Males of All Ages: Systematic Review. Urology, 2020 Jan; 135: 124-132. doi: 10.1016/j.urology.2019.10.003. Epub 2019 Oct 23. PMID: 31655079