Care of the Preputial Skin in Newborns

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You Wanna Cut off WHAT?
What is a Foreskin?

Protective projection of skin that is completely formed by 4 mths gestational age and typically adherent to glans penis for variable times in childhood.
Physiologic Phimosis

Some separation begins in utero

0 – 4% Retractile foreskin at birth

Inner prepuce and glabrous epithelium of glans are actually fused
Physiologic Phimosis
Physiologic Phimosis

Penile growth

Physiologic erections

Keratinization and desquamation

Anthropology?
Physiologic Phimosis

Benign conditions which may be seen in uncircumcised boys

* Smegma cyst

* Transient ballooning of foreskin
Physiologic Phimosis

Penile cysts

Very different from keratinized pearls which may be visible in uncircumcised boys
Physiologic Phimosis

100% Newborn males

Naturally resolves over time

So.......No care needed right??

Well.................................................................
Pathologic Phimosis

8% Taiwanese 7\textsuperscript{th} grade boys

and

15% 11-18 year old boys had phimosis that was significant enough to allow only meatus visualization or none.
Pathologic Phimosis

True pathologic phimosis is reported to be 0 to 16%

Lack of standardized terminology responsible for variation
Pathologic Phimosis

Figure 1. Tight preputial orifice on retraction of foreskin: A) Skin at preputial outlet is healthy with no scarring, and the inner preputial mucosa is starting to evert through the outlet. With physiologic phimosis, the preputial outlet is always closed and one cannot see the glans unless the foreskin is retracted, as the examiner has done in the photograph. B) In many cases of pathologic phimosis, the glans and meatus are visible without any attempt at retraction, as the scarred ring holds the preputial outlet open. There is no inner mucosal eversion through the outlet.

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Pathologic Phimosis

Paraphimosis caused by excessive retraction of a physiologic phimosis in a male infant. Note the marked swelling at the coronal sulcus and the flaccid penile shaft.

Pathologic Phimosis: Paraphimosis

Phimotic ring becomes trapped proximal to the coronal sulcus leading to progressive edema of distal tissue and glans until one is unable to easily return the prepuce to anatomic position.

*Dorsal slit
*Scissor technique reduction
*Circumcision
Pathologic Phimosis

This uncircumcised boy developed a moderately severe case of balanoposthitis.

Pathologic Phimosis: Balanoposthitis

Distal preputial and balanitic inflammation/infection which may lead to preputial fibrosis and, acutely, urinary retention

*Antibiotics
*Dorsal slit
Dorsal Slit
Pathologic Phimosis
Pathologic Phimosis

Figure 2. These photographs depict 3 foreskins with the classic appearance of BXO. The phimotic ring is closed, but the indurated, white scar is readily discernible from normal, healthy skin.
BXO

Lichen sclerosus et atrophicus that is confined to male phallus, most frequently involving the prepuce and glans but sometimes extending to involve meatus and/or anterior urethra.

*Circumcision*

*Meatoplasty with or without buccal free grafts*

*Topical corticosteroids*
Balanitis Xerotica Obliterans in Boys

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BXO should be suspected in any child with phimosis (particularly of a progressive nature) and a white sclerotic ring in the distal prepuce. Our study shows that older patients,

Depasquale et al have proposed an interesting hypothesis.\(^{15}\) In a series of 300 adult and pediatric patients with BXO they noted that circumcision alone was curative in 96%. They advocated that the main purpose of the circumcision was to desiccate the glans, stating, “BXO has a predilection for the warm, moist, urine exposed environment that exists under the foreskin.”\(^{15}\) They noted several recurrences in conserva-

Congenital Megaprepuce and Hidden Penis
CMP
CMP and HP
CMP and HP
Glanular Adhesions and Skin Bridges
Adhesion
Care of Prepuce

PHIMOSIS: STRETCHING METHODS WITH OR WITHOUT APPLICATION OF TOPICAL STEROIDS?

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The Journal of Pediatrics _ November 2005
Preputial Care?

- 4 groups of patients with A, B, C being different severity of phimosis with topical steroids and stretching exercises

- Group D stretching alone “preputial gymnastics” - retract to level of stricture for one minute four times daily for one month

- 4% required surgery in A, B, C and ~ 1/3 in group D (60 of 90 resolved phimosis)
Preputial Care?

All were considered to have at least mild pathologic phimosis.

Currently no data randomizing groups of uncircumcised boys into stretching and no intervention at all.

Only Class IV evidence as there are no published guidelines for preputial care.
Preputial Care

- We suggest the following routine care of the uncircumcised penis (Grade 1C). (See 'Routine care and hygiene' above.)
  - The penis should be washed routinely during the normal bathing of any male infant or boy. Soap and cleaning agents should be avoided
  - Avoid forcible retraction. As the foreskin naturally begins to retract, cleaning and then drying underneath the foreskin can be performed. The foreskin should always be pulled down to its normal position covering the glans after drying
  - In any child who is not toilet-trained, frequent diaper changes to prevent diaper rash and foreskin/urethra irritation

From: Wilson JM. Care of the uncircumcised penis
Preputial Care
Objective Questions

1. What is the natural timeline for foreskin retraction?
2. What is phimosis, and what distinguished physiologic from pathologic phimosis?
3. What is the routine care of the uncircumcised male?
4. Should the foreskin ever be retracted?
5. What are benign conditions are associated with an uncircumcised penis?
6. When should one refer a boy with ballooning of the foreskin while voiding to a pediatric urologist?
7. What are complications associated with an uncircumcised penis?
8. How should pathologic phimosis be treated?
9. What is paraphimosis?
10. What is balanoposthitis?
11. What is balanitis xerotica obliterans and how should it be treated?
Questions

1. What is the natural timeline for foreskin retraction?

*100% phimosis at birth
*As many as 16% of post-pubescent males may have pathologic phimosis (243/2217)

Timeline is variable if no specific care is implemented; 0 – 18 y/o
Questions

What is phimosis, and what distinguished physiologic from pathologic phimosis?
What is the routine care of the uncircumcised male?

*Regular hygiene with gentle traction on the foreskin directed proximally parallel to the axis of the penis.

The foreskin should NEVER be forcefully retracted unless part of a surgical procedure.
Questions

Should the foreskin ever be retracted?

When it can be retracted atraumatically, it should be part of urination and personal hygiene.
Questions

What are benign conditions are associated with an uncircumcised penis?

*Physiologic adherence of the inner prepuce to the glabrous epithelium of the glans penis
*Pearls of desquamated epithelial cells that accumulate between the inner layer and glans and may resemble cysts
*Balooning of the prepuce during voiding that spontaneously decompresses (if manual pressure is required to decompress the “balloon”, it is pathologic phimosis)
Questions

When should one refer a boy with ballooning of the foreskin while voiding to a pediatric urologist?

If it decompresses only with manual pressure.
Questions

What are complications associated with an uncircumcised penis?

* BXO
* Painful erections associated with micro-lacerations or obvious bleeding
* Balanoposthitis
* Painful frenular tethering
* UTI’s
* Paraphimosis
Questions

How should pathologic phimosis be treated?

*Numerous studies have demonstrated at least 80% efficacy of topical steroid application and stretching exercises
*Surgical procedure – Circumcision, dilation, dorsal slit, preputioplasty
What is paraphimosis?

*Prolonged retraction of foreskin resulting in distal and glanular penile edema which prevents the return of the prepuce to anatomic position.*
Questions

What is balanoposthitis?

*Edema and erythema of glans and distal prepuce which may be from dermatitis and/or infectious with yeast and/or bacteria.
Questions

What is balanitis xerotica obliterans and how should it be treated?

*Lichen sclerosus of male phallus which is treated with circumcision, glanular reconstruction, topical corticosteroids or a combination thereof. Almost all cases have a pathognomonic, whitish ring of fibrosis at distal most aspect of prepuce.
BXO whitish ring