

Circumcision

Done by :

Shams Arman

Eyad M Saad

Supervised by Dr. Abdullah al-Rawi



Definition

- ⌚ Circumcision is a surgical procedure to **remove the foreskin** covering the glans (head) of the penis.
- ⌚ Usually, babies undergo circumcision shortly after birth. Circumcision began as a religious rite. Today, people get circumcised for religious, medical and cultural reasons.
- ⌚ Many baby boys get circumcised, usually within the first week of life. Adults can get circumcised as well, though it's less common.

Foreskin?

- ⌚ The foreskin is a piece of **skin** that covers the round tip of the penis.
- ⌚ It is a **double-layered** fold of smooth muscle tissue, blood vessels, neurons, skin, and mucous membrane that covers and protects the glans penis and the urinary meatus. It is **also described as the prepuce**.
- ⌚ The foreskin is mobile, fairly stretchable, and acts as a natural lubricant, and is lined up by an external keratinized layer and an internal mucosal layer.
- ⌚ When a baby is born, the foreskin is adherent to the glans penis. **These adhesions separate spontaneously with time**, allowing the foreskin to become retractile. **At 1 year of age**, about 90% of boys have a **non-retractile foreskin**. **By 16 years this declines to just 1%**.
- ⌚ Sometimes, the foreskin doesn't separate when it should and remains tight, a condition called phimosis. Usually phimosis requires further intervention or circumcision to correct it.



How common is circumcision?

- 🕒 Circumcision is the most common surgery among males. In the United States, up to 60% of baby boys are circumcised. Around the world, the rate is about 33% of males.
- 🕒 The highest rates of circumcision are in the U.S., Middle East and South Korea. It's much less common in Europe, other parts of Asia and South America.
- 🕒 Jewish and Muslim people perform circumcision as part of their religions.

Indications

A- On request by the parents for **religious, cultural or hygienic reasons.**

B- Medical indications:

1. Recurrent urinary tract infection(UTI): Circumcision is occasionally justified in boys with an abnormal upper urinary tract and recurrent urinary infection. It may also help boys with spina bifida and neurogenic bladder who are more prone to UTIs.

2. Recurrent **balanitis (inflammation of the glans) and **posthitis** (inflammation of the foreskin)**

3. Decrease risk of sexually transmitted infections(STDs**) (syphilis ,HIV) .**

4. Decrease risk of **penile cancer and cervical cancer for partners**

Indications:

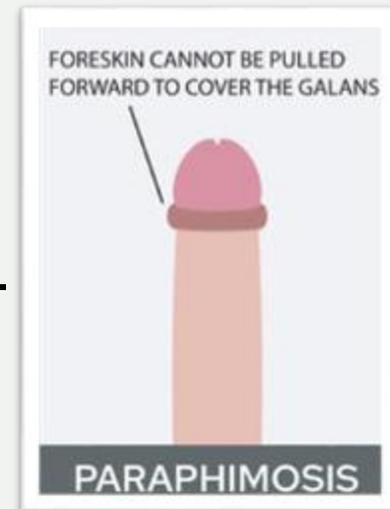
5. Phimosis (tight foreskin) : the **inability to retract** the foreskin covering the head (glans) of the penis.

*two types:

1) Physiologic phimosis: Children are born with **tight foreskin** at birth and separation occurs naturally over time. Phimosis is normal for the uncircumcised infant/child.

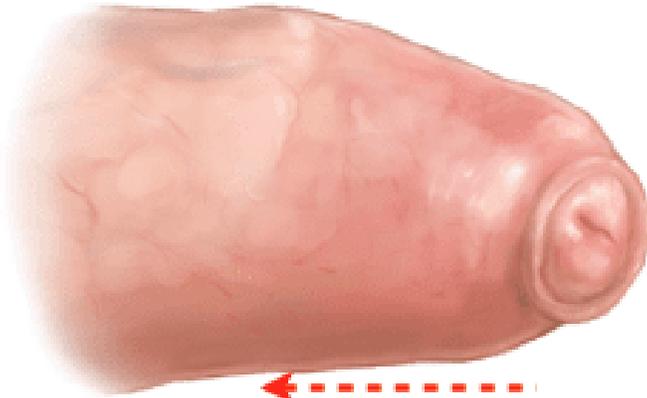
2) Acquired (pathologic) phimosis: occurs due to scarring, infection, or inflammation and can lead to bleeding and scarring.

6. Paraphimosis (urologic emergency): the foreskin is **not pulled back** over the glans after retraction causing a swelling of the distal penis, discomfort and vascular compromise.



Phimosis

↳ Inability to retract the foreskin

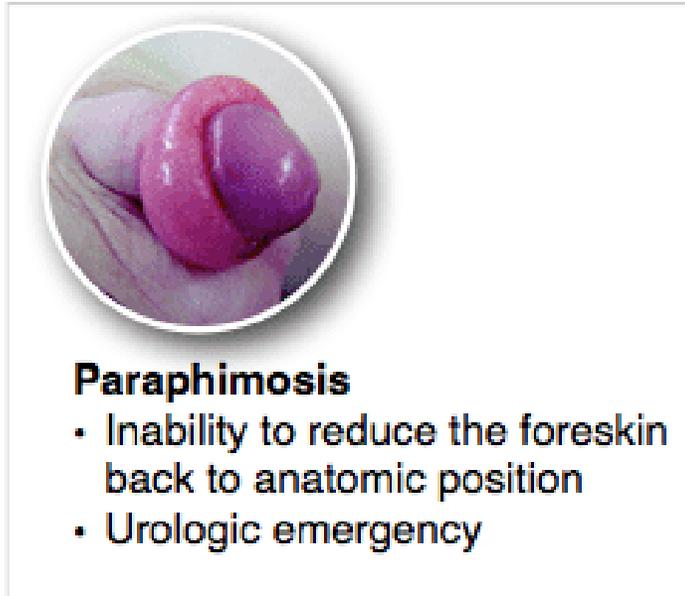


Cannot retract foreskin

Can be normal up to 3 years old
Clinically significant after age 4

Treatment

- Topical steroid cream
- Periodic gentle retraction



Paraphimosis

- Inability to reduce the foreskin back to anatomic position
- Urologic emergency



Phimosis



Paraphimosis

Contraindications

A) Absolute Contraindications: These are conditions where circumcision must not be done until corrected or excluded.

1. **Hypospadias** The urethral opening is on the **ventral** surface of the penis. Reason: The foreskin may be needed later for surgical repair.
2. **Epispadias** Urethral opening is on the **dorsal** surface. Reason: Same as above – foreskin may be required for reconstruction.
3. **Ambiguous genitalia** / intersex states Genital appearance is unclear; circumcision should be delayed until diagnosis.
4. **Bleeding disorders** (e.g., Hemophilia) : High risk of uncontrolled bleeding

Contraindications

B) Relative Contraindications Circumcision can be done after correction or stabilization of these conditions:

1. Acute local infection (balanitis, balanoposthitis, or diaper rash) Delay until infection resolves.

2. Prematurity, failure to thrive, and ill baby: until the infant is medically stable.

3. Penile anomalies e.g., chordee (penile curvature), buried or concealed penis.

4. Family history of bleeding disorders Must rule out coagulation defects before proceeding.

Age for Circumcision

- 1. Newborn** (1–28 days): **Most common & preferred**, Less bleeding, and rapid healing (**Local anesthesia**)
- 2. Infant** (1–12 months): Acceptable if medically fit if neonatal period missed (**General anesthesia**)
- 3. Child** (>1 year): Elective or religious/cultural, Healing slower. (**General anesthesia**)
- 4. Adult** : May Requires full anesthesia, longer recovery (**Local or General anesthesia**)

Methods

🕒 What happens during a circumcision?

1. Separates the foreskin from the head of the penis.
2. Uses a scalpel to remove the foreskin.

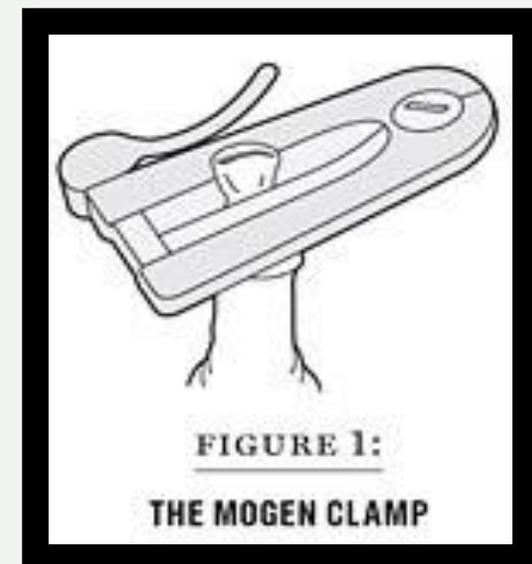
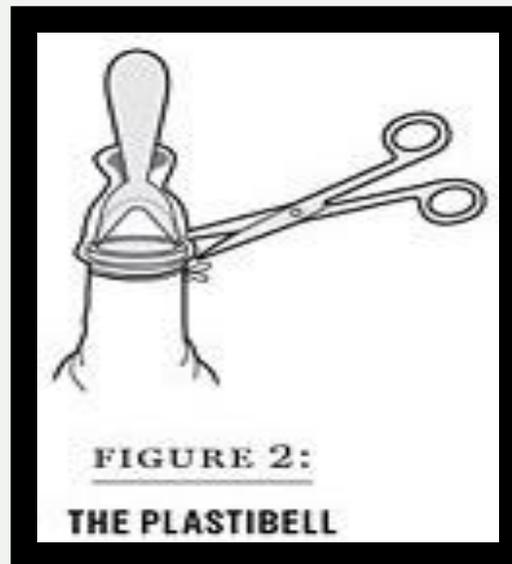
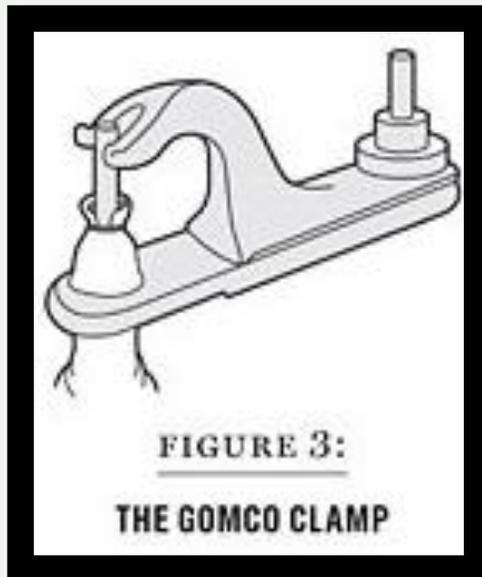
🕒 **Freehand technique:** Physician removes the foreskin with a scalpel. Performed in operating room and requires general anesthesia. Less complications.

🕒 **Clamp techniques:** a special **clamp** is placed to compress the edges of the foreskin before removing the 'extra' skin. Generally utilized for neonatal circumcision. **Most appropriate when infant is under 4-6 weeks of age and under 12 pounds(5.5 Kg)**



Types of clamps:

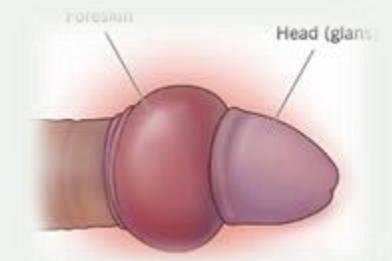
- 1. Gomco clamp:** Common in newborns. Metal bell protects glans; foreskin clamped and cut. **(higher bleeding risk)**
- 2. Plastibell clamp:** Plastic ring left in place; foreskin tied with string. The necrosed foreskin and ring fall off in 5–10 days. No sutures required. **(Higher site injuries and serious complication)**
- 3. Mogen clamp:** Used mainly by experienced operators. Fast and **bloodless**; glans not exposed during cut **(Higher injury rates to the tip of the penis).**



Complications of Circumcision:

A) Early Complication

1. The **most common** complication of male circumcision is **bleeding**.
2. **Infection** Redness, discharge, or swelling at the site.
3. **Glans injury:** If the glans is amputated, the tissue should be wrapped in saline-soaked gauze and placed indirectly on ice for transport. The patient should be transferred immediately to a referral center, as successful reattachment is possible if performed within eight hours of injury.
4. **Urethral injuries:** Urethrocutaneous fistulas (correction requires a second operation that is performed six months after the initial procedure)
5. **Removal of excessive skin:** In many cases, conservative therapy consisting of wet to dry or antibiotic ointment dressings results in adequate healing by secondary intention.
6. **Inadequate skin removal:** can lead to paraphimosis which is an emergency.
7. **preputial ring Edema:** Puffy foreskin” (mild swelling, not trapped)



B) Late Complication

1. **Meatal stenosis**: Narrowing of meatus due to chronic irritation.

2. **adhesions** Glans adheres to shaft skin.

3. **Epidermal inclusion cyst** : a rare, benign lump that occurs due to trapped epithelium or excessive scar formation.

