



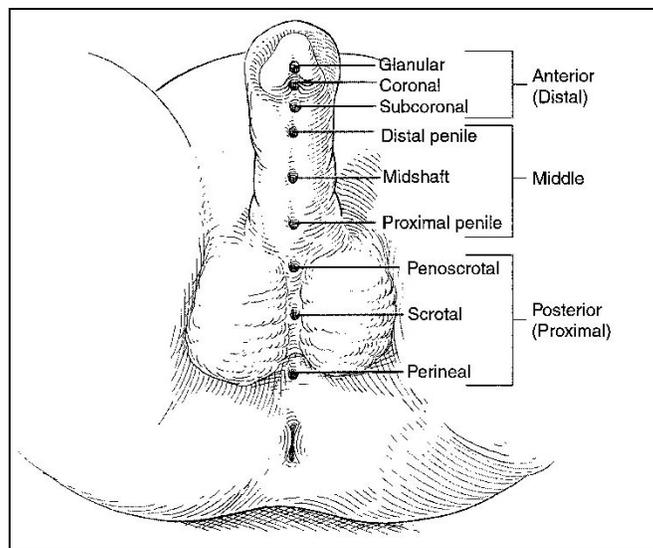
Kapi'olani Pediatric Urology

Hypospadias

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What is hypospadias?

Defined as a congenital deformity where the urethral opening is located beneath the penis rather than the tip, hypospadias ranges from a mild to severe deformity. The more common form is the distal variety, with the opening toward the front of the penis, which can usually be repaired with pleasing cosmetic results. More severe forms may be associated with the opening located at the base of the penis or further back near the anus.



Usually hypospadias is also present with downward curvature of the penis (chordee), and a flattening of the foreskin with a hood-like covering. Occasionally the scrotum is also malformed and appears higher around the penis. Hypospadias can be found in a variety of congenital syndromes, including those with cardiac, renal, and testicular anomalies.

(see next page)



What causes hypospadias?

Hypospadias develops early in gestation and occurs for unknown reasons, although there is slight familial tendency. Recent evidence suggests that the incidence is increasing and may be linked to environmental and genetic disruptions during the period when genital development is particularly sensitive to sex-steroid hormone imbalances. Occasionally, hypospadias can be detected by prenatal ultrasound. No pre-natal treatment or intervention is available.

Parents should not request a circumcision for their newborn son with hypospadias because the foreskin may be necessary to assist with surgical repair. Sometimes hypospadias is not recognized until after the circumcision is completed. These cases are usually mild forms that can be repaired without the use of foreskin.

How is it treated?

Hypospadias is corrected with an operation usually done after the newborn period, around six months of age. Depending on the severity of the deformity, correction may require more than one procedure. In milder forms, the operation can usually be done in a single surgery involving removal of the foreskin. More severe forms may require a staged approach with about six months between surgeries. Correction of the penis curvature is an essential part of the repair.

Your son will undergo general anesthesia delivered via a mask over his nose and mouth. Once asleep, our anesthesia team will insert an IV and a breathing tube in his windpipe. Next, the anesthesiologist will inject pain medicine into the epidural space (caudal or epidural block), which will provide hours of pain relief after the surgery. The caudal block is an essential part of the operation, allowing your child to awaken pain free after the operation and remain so for several hours.

The operation entails cutting the skin of penis to correct the curved erectile bodies beneath, creating a new urethra (using adjacent skin or a skin graft), re-shaping the head of the penis (glans) and urethral opening, and then covering the repair with penile skin. Correcting curvature is done by equalizing the upper and lower surfaces of the erectile bodies. This is accomplished by placing permanent plicating (“bunching”) sutures along the longer upper surface. For severe cases a skin graft is inserted into the shorter lower surface.

Most boys will only need a single operation; however, if the hypospadias or curvature is severe, it may require two or more surgeries, each about six months apart. If a fistula or unwanted opening through the skin develops after the operation (see below), a minor corrective procedure will be required six months later.

Most patients have a urinary stent placed into the bladder at the time of surgery and held to the head of the penis with a suture. This will help protect the repair from developing a fistula or breakdown of the tissues. Using two diapers and routing the stent tube to drain urine continuously into the outer diaper will keep your child dry. The stent is removed five to 10 days after the operation in the office.

What about after the operation?

1. Medications:

- For pain. Infants will usually only require Ibuprofen or Tylenol for pain management. Toddlers and older children may require a stronger pain reliever such as Tylenol with codeine syrup or tablets.
- For bladder spasms. Because the urinary stent may cause bladder spasms (a sharp sensation of urinary urgency which may cause the child to cry out and perhaps grab his penis), Oxybutynin (Ditropan) should be given every eight hours while the catheter is in place.
- To prevent infection. A small daily dose of antibiotic will be prescribed for the duration of the catheter.
- Wound protection: Bacitracin or neosporin ointment should be applied to tip of the penis three times a day or with every diaper change. Once the dressing is removed apply to the entire penis.

2. Bandage: A wrap-around bandage should be removed on the second or third day depending on extensiveness of repair. The can be easier if done in the tub with warm, soapy water. The penis will be swollen and bruised, and even ooze some blood after the dressing is removed. Apply pressure with gauze or tissue to stop the oozing. Apply bacitracin or neosporin ointment over the suture lines three times a day or after each diaper change. The ointment will tend to cake on the penis; this can be avoided by bathing daily and avoiding the use of powders.

3. Bathing: Prior to removing the bandage, use cleansing wipes or sponge-bathe your son. Once the bandage has been removed, a daily bath will provide soothing relief. It is OK to submerge the urethral stent in the bathwater. The bladder pressure is higher than the surrounding bathwater and it will prevent a significant amount of bathwater from entering the catheter. Pat the area dry and apply ointment. *(see next page)*

What about complications?

1. **Fistula.** A small hole may develop in the repair because of poor tissue healing, resulting in a urine drip from the undersurface of the penis. If this happens, a small operation will be required to correct it. The procedure cannot be done until about six months when all healing changes from the initial surgery have subsided.

2. **Infection of urine.** Patients who require the creation of a long urethra may have problems with urinary dribbling and colonization of the urine by bacteria. This occurs because the newly constructed urethra lacks the overlying vascular supply found in a normal urethra, which enables the urine to be completely expelled from the penis. Boys with this condition will need to learn to “milk” excess urine from the urethra after voiding.

3. **Stenosis (closure) of the meatus (urethral opening),** which can contribute to the formation of a fistula. This may require insertion of a dilator into the tip of the penis once or twice daily.

4. **Recurrence of penile curvature.**

How do we follow up?

After the operation, your son should be seen at the office in seven to 10 days to remove the stent. If assistance is needed to remove the dressing, call the office at (808) 983-6210 for help. A second appointment will be made one to two weeks later to monitor healing. At this time a small catheter may be inserted into the meatus (urethral opening) to make sure there is no obstruction forming. A final visit should be scheduled about six months after the surgery. If there are any concerns about problems or the appearance, please call the office. Lastly, it is sometimes helpful for your son to be seen around puberty to assess for potential problems such as severe curvature with erections, urinary spraying, dribbling and infections, and cosmetic appearance.

For any questions or assistance, call Kapi‘olani’s Pediatric Urology Office at (808) 983-6210.