

Undescended Testicle

Overview

Undescended testicle, also called cryptorchidism, is a common condition in which one of the testes (testicle, male reproductive gland) is located outside of the scrotum. During the eighth month of gestation, the testes migrate from the abdomen, through the groin, and into the pouch that contains the testes (scrotum). Undescended testicle may be located in the abdominal cavity, in the passageway in the groin (inguinal canal), or in an ectopic location (e.g., superficial pouch in the groin, perineum, upper thigh). This condition is usually present at birth (congenital) and is associated with sterility and an increased risk for testicular cancer if not corrected.

Incidence and Prevalence

Undescended testicle occurs in approximately 30% of premature males and 3% of full term male infants. In 80% of cases, the undescended testicle migrates into the correct position without intervention during the first year. The condition occurs in both testicles in about 10% of cases.

Risk Factors and Causes

The cause of undescended testicle is unknown. Having a father or brother who had the condition increases the risk. Other risk factors include the following:

- Low birth weight (less than 2500 g)
- Maternal exposure to estrogen during the first trimester
- Multiple birth (e.g., twin, triplet)
- Premature birth (before 37 weeks gestation)
- Small size for gestational age

Signs and Symptoms

An undescended testicle is not located within the scrotum. The condition may be associated with other abnormalities of the genitourinary system (e.g., [hypospadias](#)).

Diagnosis

Diagnosis of this condition is made through physical examination at birth to locate the testis. It is sometimes diagnosed by prenatal ultrasound. If one testicle is undescended, the scrotum appears unbalanced. If the undescended testis is able to be felt (palpable) it may not have descended fully, may have descended into a location other than the scrotum (ectopic), or may move in and out of the scrotum through muscle contraction (retractile).

If the testis is not palpable, it may be located within the abdomen or may be absent (occurs in 5% of cases). A congenitally absent testicle may result from an abnormality in testicular blood vessels or [testicular torsion](#) in utero. This condition is diagnosed using a **blood test** to determine the level of gonadotropin, which is a hormone that stimulates development of the testis.

Treatment

Treatment for undescended testicle may include manipulation into the scrotum (in cases of retractile testes), hormone therapy, and surgery. Treatment is not recommended until after the age of 1 year, because in most cases, the testis descends without intervention during this time.

The goals of treatment include the following:

- Improve fertility
- Promote easier examination for testicular cancer (earlier detection)
- Correct associated abnormalities (e.g., hernia)
- Prevent [testicular torsion](#)
- Alleviate psychological concerns regarding body image
- Reduce risk for injury (especially if the testis is positioned near the pubic bone)

Hormonal therapy with human chorionic gonadotropin hormone (hCG) is used with some success when the testis is not located within the abdomen. Hormone injections are administered twice per week, for 5 weeks. Side effects include increased scrotal folds or creases, increased skin pigmentation, penile growth, and pubic hair. These effects regress when treatment is discontinued. This therapy may be combined with gonadotropin-releasing hormone (GnRH) therapy, but has not been approved in the United States.

Surgery for an undescended testicle is called orchidopexy or orchiopexy. If the testicle is located outside of the abdomen (i.e., in the groin), the procedure is performed under general anesthesia and the patient is usually discharged the same day. In this procedure, which takes approximately 90 minutes, the testicle is located, removed through a small incision, and placed into the scrotum through another small incision. The testicle may be sutured into place. Bed rest is recommended for 2 or 3 days following orchidopexy and strenuous activity should be avoided for approximately 1 month. Success rates for this procedure are generally good and fertility is usually achieved.

An undescended testicle that remains in the abdomen is located in an exploratory **laparoscopy**. In this procedure, a small incision is made near the navel and a telescope-like instrument that consists of a tiny camera and a light (laparoscope) is inserted to allow the physician to see inside the abdomen and locate the testicle. The physician then removes the testicle (if it is malformed) or performs orchidopexy. Success rates for this procedure are lower than if the testicle is located outside of the abdomen.

Complications

Complications from orchidopexy include adverse reactions to anesthesia, bleeding, and infection.

Prognosis

Undescended testicles usually descend into the scrotum without intervention within the first year of life. The prognosis for fertility in these cases, as well as those that are surgically corrected, is good.