



Patient Care > Undescended Testicle

Definition:

An undescended testicle is one which has never reached the scrotal sac. The empty sac is noticeably smaller and smoother than the uninvolved side. The testicle may be felt in the groin area (inguinal canal); or it may still be within the abdominal cavity. This difference is important in the surgical repair and outcome.

Incidence:

2-3% of all full term males have at least one testicle which has not completed its descent into the scrotum at birth. The right sided is affected two times more often than the left. In premature infants the number of affected males is closer to 21%. However, by one year of age, all but 0.2% -0.5% (5.4% of premature infants) will have normally descended testicles. It is rare for a true undescended testicle to descend after the first year of life.

Cause:

Embryologically, the testicles form high in the abdomen near the kidneys. Late in pregnancy they begin their descent through the lower abdominal wall and then through the inguinal muscle rings into the scrotum. Failure of complete descent may be due either to mechanical obstruction or from a disturbance of endocrine factors that normally promote testicular descent. Rarely, when the testicle is not felt in the inguinal area, it is entirely absent. This may be caused by failure of development of the testicle or be secondary to testicular torsion – a twisting of the testicle on its own blood supply. In such instances the associated testicular structures, but not the actual testicle, are found at surgery.

Indications for Surgery:

1. Fertility: Fertility is most parent's primary concern in a child with an undescended testicle. Some time between the first and fifth year of life, microscopic changes affecting sperm formation are seen in the undescended testicle. These changes are felt to be related to the 1-3 degree temperature increase of the inguinal canal or abdomen when compared to the temperature in the scrotum. In the unilaterally undescended testicle with a clinically normal opposite testicle, fertility should approach that of a male with normally descended testicles.

Patients with bilateral undescended testicles have a greater risk of infertility, particularly if the testicles are intra-abdominal in location. The present statistics suggest that as many as half of adult males with repaired bilateral undescended testicles are infertile. Bringing the testicles down earlier may improve these fertility statistics.

2. Trauma and torsion: The scrotum provides protection from injury due to its mobility. A testicle in the inguinal area, on direct impact, may be trapped against the pelvic bone with resulting injury. Torsion (twisting of the testicle on its cord) causes compromise of the vascular supply and risks the loss of the testicle if not repaired immediately. Orchiopexy eliminates both of these potential problems.
3. Malignancy: The incidence of testicular malignancy is 2 per 100,000 adult males. In the undescended testicle population, this incidence is 40 times greater. Surgical repair, if done early in life may decrease this incidence but more importantly, it allows for early detection of disease should it occur.

Surgical Repair (Orchiopexy):

Surgery is done as an outpatient requiring a 4-5 hour hospital stay. The surgery is done through an incision in a skin crease in the groin area. The testicle is located and a second incision is made at the base of the scrotum. The testicle is brought down into the scrotum and stitched in place. The stitches in the scrotum will eventually dissolve, but adhesions will have formed by then to hold the testicle in the scrotum. Both incisions are closed with stitches that dissolve and do not have to be removed. The only restriction after surgery are no tub bath for 2-3 days and no straddling toys for 7-10 days or until all the swelling and tenderness have disappeared. Older children are kept out of contact sports/physical education for 2-3 weeks after surgery.

Revised: Suzanne Yoder, MD 4/28/08

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