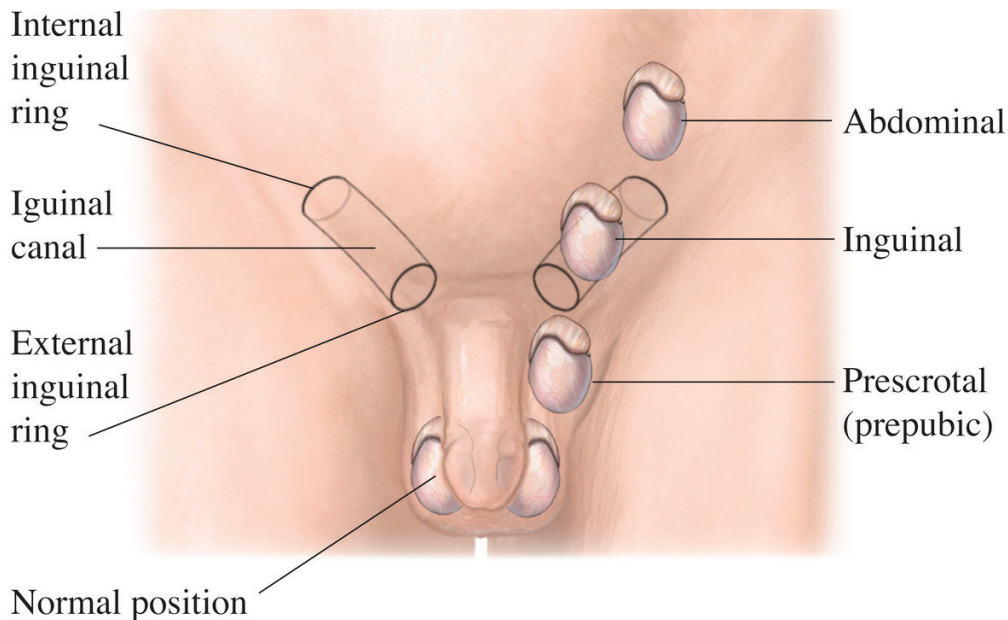


Undescended testicle (cryptorchidism)

An undescended testicle is one that cannot be brought manually to the bottom of the scrotum and remains in that position.



Presentation

An undescended testicle may be:

- **Palpable**, located high in the scrotum, at the superficial portion of the inguinal canal, or ectopic
- **Impalpable**, located deep in the inguinal canal, intraabdominal, or absent

Relevant history to inquire about

- Gestational history (undescended testicle is associated with low birth weight and prematurity)
- Testicle previously present or was descended at birth
- Does the testicle come down to the scrotum in a warm bath
- Family history of undescended testicle

Important aspects to note on the physical exam

- Undescended testicle position and size, if palpable
- Contralateral testicle position and size
- Scrotal development
- Penile development
- Inguinal/abdominal scars
- Spine, sacrum, anal anomalies
- Syndromic phenotype

Diagnosis of undescended testicle is clinical, blood tests and imaging are rarely indicated.

Standard of care for an undescended testicle

- Orchiopexy (surgical repositioning of the testicle within the scrotal sac)
 - o Can be in a one-stage or a two-stage operation
- Hormonal therapy is not recommended

Timing of orchiopexy

- **Between 6 and 18 months of age, ideally before 1 year of age**
- Timely treatment is paramount to:
 - o Optimize fertility potential and psychosocial development
 - o Minimize the risk of testicular malignancy, testicular torsion and trauma
 - o Treat a possible concomitant inguinal hernia

Guidelines for referral to surgery

- **Refer infants who do not have spontaneous testicular descent by six months of age** (corrected for gestation age) for timely evaluation
- Refer all phenotypic male newborns with bilateral, nonpalpable testes; a concurrent referral to endocrinology to evaluate for a possible disorder of sex development
- Avoid performing ultrasound or other imaging modalities in the evaluation of boys with undescended testicle prior to referral as these studies rarely aid in decision making
- Counsel boys with a history of undescended testicle and their parents regarding potential long-term risks and provide education on infertility and cancer risk

Special cases

Retractile testicle

- Testicle is normal in size, intermittently resides in the groin/high in the scrotum, **but can be brought into the scrotum manually and remains there for a period of time**
- Normal variant
- Management: Annual clinical surveillance until puberty

Ascending testicle (acquired undescended testicle)

- Testicle descended at birth but subsequently ascended
- Management: Orchiopexy at the time of diagnosis

Postpubertal undescended testicle

- Elevated risk of testicular cancer
- Management: Consider Orchiectomy (removal of the testicle)

Bilaterally nonpalpable testicles

- Differential diagnosis: Disorders of sexual development, true undescended testes, congenital anorchia, bilateral testicular atrophy
- Workup: Karyotype, pelvic ultrasound, hormones levels (adrenal hormones, LH, FH, anti-Mulleiran hormone, inhibin B, hCG, testosterone)

References

1. Taghavi K, Chin A, Radhakrishnan J. Cryptorchidism. APSA Pediatric Surgery Library.
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