



Cryptorchidism

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This leaflet contains general information about renal duplication. If you have any specific questions you should consult your doctor or other professional healthcare provider.

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You can find this and other information on urological diseases at our website: <http://patients.uroweb.org>.

Cryptorchidism - Undescended or Hidden Testicles

What is cryptorchidism?

The failure of the testicles (or “testes”) to descend into the scrotum (the skin sac below the penis) is called “cryptorchidism”. It is also called having hidden or undescended testicles. The condition is generally uncommon but often affects boys born prematurely.

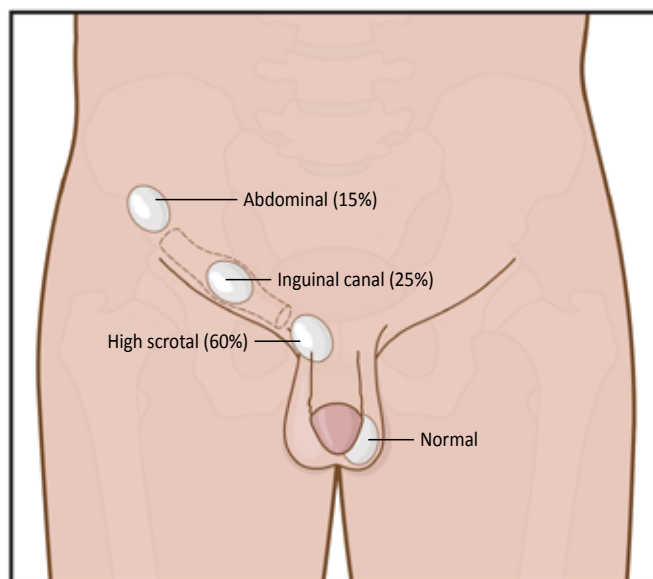
As a male foetus grows, the testicles appear in the abdomen near the kidneys. During the seventh month of development, the testicles start to descend to the groin. They should reach their final position in the scrotum by 6 months after birth.

The testicles make sperm and testosterone, the male sex hormone. An undescended testicle may produce hormones, but the ability to make sperm is disrupted.

At 1 year of age, nearly 1% of all full-term male infants have cryptorchidism. This is the most common birth defect of the sex organs in newborn male infants. Usually, only one testicle is affected, but both testicles are undescended in about 10% of children with cryptorchidism.

Recommendations for cryptorchidism

- Boys with retractile testes (testicles that may move between the scrotum and the groin) do not need medical or surgical treatment but require close follow-up until puberty.
- Surgery to move the undescended testicle to the scrotum should be done by 1 year of age or 18 months at the latest.
- For boys with non-palpable testes and no evident disorders of sex development, laparoscopy is the best way to find a testicle in the abdomen. The testicle can be removed or repositioned in the same session.
- Hormonal therapy is not a standard treatment, however, in some cases it is still used.
- Older boys with one normal testicle and one testicle in the abdomen, removal of the non-palpable testicle can be considered because of the risk of developing testicular cancer later.
- Male newborn infants with two non-palpable testicles should be evaluated for possible disorders of sex development.



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Fig. 1: in cryptorchidism, the testicles fail to descend into the scrotum. Illustration shows the percentage of the testicle position in patients with cryptorchidism.

Symptoms

The main indication of an undescended testicle is not feeling it in the scrotum. The testicle is typically discovered to be missing during an infant’s examination after birth. Regular check-ups will be needed to monitor cryptorchidism for the first 6 months. If the testicle does not descend on its own, treatment will be needed.

Diagnosis

Physical examination

Physical examination is the only way to classify an undescended testicle as palpable or non-palpable. Imaging studies do not help. The doctor’s examination will include a visual description of the scrotum with the child lying on his back and with crossed legs.

If one testicle is undescended and non-palpable and the other is enlarged, a testicle may be missing or undeveloped. The abdomen should be examined visually to make sure the undescended testicle is not ectopic.

Diagnostic laparoscopy

Internal examination using a fibre-optic tube-like instrument with a camera (endoscope) is the only way to reliably diagnose a non-palpable testicle. The surgeon inserts the endoscope through a small cut in the abdomen (laparoscopy). Examination under general anaesthesia before laparoscopic assessment is recommended because some originally non-palpable testes become palpable.

Treatment of cryptorchidism

If the testicle does not descend on its own, treatment will be needed. The goal of treatment is to prevent problems making sperm and hormones. Treatment should be done at around 1 year of age or 18 months at the latest.

Hormonal therapy

In some cases, hormone injections may be used to try to prompt the testicle to move to the scrotum on its own. This treatment is not common and only suggested to boys with bilateral undescended testes, to preserve fertility.

Orchidopexy

The main treatment for cryptorchidism is surgery to move the testicle into the scrotum (orchidopexy). This surgery is nearly 100% successful. If a testicle has not fully descended by the age of 6 months, surgery should be performed within the subsequent year. Delaying treatment can increase the risk of infertility later in life.

Surgery for a non-palpable testicle includes an examination with laparoscopy. This is also done with the boy under general anaesthesia. Laparoscopy is the best way to look for an undescended testicle in the abdomen. Removal or repositioning can be done during laparoscopy if needed.

General information

What causes cryptorchidism

It is unknown why some testicles do not descend. Possible risk factors include:

- Family history of cryptorchidism or other genital development problems
- Premature birth or low birth weight

- Conditions that affect foetal growth
- The mother's use of alcohol or cigarettes during pregnancy
- Previous exposure of either parent to certain pesticide chemicals

Types of cryptorchidism

Cryptorchidism is classified as "palpable" or "non-palpable". A palpable undescended testicle can be felt on examination. A non-palpable testicle cannot be felt. Approximately 70% of all undescended testicles are palpable.

A palpable undescended testicle may have halted during a normal descent. Maybe the testicle grew in the wrong place and is outside of the scrotum (ectopic). Perhaps a muscle reflex causes the testicle to move back and forth between the scrotum and the abdomen (retractile).

A non-palpable undescended testicle is either located up inside the abdomen or even may be absent. It may be above the genital organs (inguinal ring), near a kidney, between the rectum and the bladder, or near the muscle wall that covers the stomach.

Treatment is based on the location and presence of the testicles. Ectopic palpable testicles require surgery. A retractile palpable testicle should be watched closely until puberty in case it returns to the abdomen (ascending). If both undescended testicles are non-palpable and sexual differentiation problems exist, an endocrinological and genetic evaluation should be done.

Follow-up of cryptorchidism

Most men who had one undescended testicle in childhood are able to father children. The ability to reproduce of men after the orchidopexy before the age of 18 months is nearly the same to the other men. Men who had two undescended testicles have a higher risk of infertility.

Boys with an undescended testicle have an increased risk of developing testicular cancer. Screening both during and after puberty is recommended.

Boys with retractile testes do not need medical or surgical treatment but require close follow-up until puberty.



FAQs about cryptorchidism

The paediatrician did not find testicles in my son's scrotum after the birth. What should we do?

Your paediatrician will regularly check your son's genitals, it might descend by the age of 6 months. He might send you to a paediatric surgeon or paediatric urologist who will examine your son and recommend further treatment.

What age do the testicles drop?

The descent of testis is ended by 6 months of age.

The doctor said that I should observe the position of testicle but I cannot find it in the scrotum?

Try to examine your boy when he is relaxed, e.g. during a warm bath or after he fell asleep. If you cannot find it, report it to your doctor.

Our son has cryptorchidism confirmed by a paediatrician. Can we avoid the operation?

You can consult your concerns with a paediatric surgeon or paediatric urologist. He will decide the need for the operation, he will discuss right term and type of operation.

Our son is 12 years old, during last examination paediatrician did palpate testicle in the groin but it used to be in the scrotum. Is the testicle going to be damaged?

Generally, the environment of the groin is not profitable for the testes and it might lose its function. The testicle might be retractile and not need any operation or undescended. The anamnesis of the position of testicle when the boy is relaxed might play a crucial role in the decision for further treatment.

Our son has had surgery to bring the testicle into the scrotum. Does surgery have an effect on his fertility? Can he have children when he grows up?

The ability to reproduce in men after the orchidopexy before the age of 18 months is nearly the same to the other men. Men who had two undescended testicles have a higher risk of infertility. You can examine the spermogram after the puberty to know the fertility potential of your son.



Glossary of terms

Cryptorchidism

An absence of one or both testes in the scrotum

Ectopic testis

The testis descended outside the scrotum

Endocrinological evaluation

Measures of the levels of certain hormones produced by your body

General anaesthesia

The state when the patient is completely unconscious and unable to feel pain during medical procedures

Genetic evaluation

Investigation of the influence of genes on diseases

Laparoscopy

A surgical procedure used to examine and operate the organs in the abdominal cavity

Puberty

A natural process when a child's body changes into adult body that is able to have an intercourse and reproduce

Scrotum

The skin sac below the penis

Urologist

A doctor specialized in health and diseases of the urinary tract and the genitals.

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