Disclaimer

This movie is an educational resource only and should not be used to manage genitourinary health. All decisions about Cryptorchidism must be made in conjunction with your Physician or a licensed healthcare provider.
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What are Undescended Testicles?

Cryptorchidism (kript-OR-kid-izm), also referred to as undescended testicles, is a condition in which one or both testicles fail to move from the abdomen, where they develop before birth, into the scrotum.

In order to learn more about undescended testicles, it is necessary to understand the normal male reproductive system.

Normal Male Reproductive System

Penis

The penis is the male sex organ and serves as a passageway for urine and semen to flow out of the opening at the tip of the penis.

(Refer fig. 1)

Urethra

The tube that carries urine and semen through the penis to exit out of the tip at the urethral opening.

(Refer fig. 2)

Vas Deferens

This is the muscular tube that carries semen from the testicles to the urethra during ejaculation.

(Refer fig. 3)
Testicles or Testes
The testes are two glandular organs that secrete semen into the urethra.

(Refer fig. 4)

Scrotum
This is the sac that contains the testicles and hangs below the penis.

(Refer fig. 5)

Prostate
The main role of the prostate is to produce semen, the milky fluid that transports sperm during ejaculation.

(Refer fig. 6)
Symptoms

Children with undescended testicles do not exhibit any symptoms except upon physical examination, the scrotum does not contain both testicles. There may be one testicle present or none, sometimes referred to as an empty scrotum.

(Refer fig. 7)

Causes

The cause of Cryptorchidism is unknown. It is believed to be caused by genetics or environmental factors that can affect hormones and the development of the growing fetus. Maternal health may also be a factor affecting the growing fetus and the development of the testes.

(Refer fig. 8)

Complications

The testicles require a cool environment and are therefore naturally held in the scrotal sac outside the body.

When a testicle has not descended properly and is still located inside the body, the higher internal body temperature can negatively affect the functioning of the testes.

As a result, males born with undescended testes are at increased risk for decreased fertility later in life. The condition also increases the risk of developing testicular cancer later in life.

(Refer fig. 9)
Diagnosis

Undescended testes may be diagnosed before birth on prenatal ultrasound but is usually diagnosed on the initial physical examination of the male baby at birth. Once it is determined that one or both testes have not descended into the scrotal sac, your physician will want to determine where the testicle is located. This may be done by touch or palpation in the groin area. If the testes are not palpable, further tests are indicated to determine the location. Tests that may be ordered include:

Ultrasound

This noninvasive test uses high-frequency sound waves to produce dynamic images (sonograms) of organs, tissues, or blood flow inside the body.

(Refer fig. 10)

MRI

MRI uses powerful magnets and radio waves instead of x-rays to take pictures of parts of the body.

(Refer fig. 11)

Blood Tests

Testing the blood for hormone levels to determine the child’s sex is male and not female with ambiguous genitalia.

(Refer fig. 12)
Conservative Treatment

In most cases, the testes will descend into the scrotum without any intervention by the time the child is a few months old.

If this does not occur naturally then the child may receive hormone injections (B-HCG or testosterone) to try to bring the testicle into the scrotum.

(Refer fig. 13)

Surgical Introduction

If the testes do not descend naturally or with the help of hormone injections, then surgery may be indicated. Surgery to treat Cryptorchidism is called Orchidopexy or Orchiopexy. It is performed under sterile conditions in the operating room by a pediatric urology surgeon and may be performed as day surgery enabling the patient to go home the same day.

The surgery can be performed laparoscopically through tiny incisions using a laparoscope, a small viewing instrument with a light and video camera on the end.

Surgery

Orchidopexy surgery is performed with your child under general anesthesia. He will be asleep and not feel any pain during the operation.

Your surgeon will make a tiny incision over the location of the undescended testicle based on the imaging results showing the location of the testes. A tiny incision is also made in the scrotum.

(Refer fig. 14 to 19)
Surgery
The testicle is detached from the tissues around it and then pulled down into the scrotum with the spermatic cord attached.

Stitches are placed to secure the testicle to the scrotum. The incisions are then closed and covered with sterile dressings.

(Refer fig. 14 to 19)
Post Operative Guidelines

Your surgeon will give you specific guidelines to follow after your child’s surgery. Common post operative guidelines include:

- Ensure adequate rest and a nutritious diet to promote healing.
- Avoid sports, rough playing, bike riding, or any activity that could injury the groin area for the first two weeks after surgery.
- Report any signs of infection such as fever, chills, or redness or drainage from the incisions promptly to your surgeon.
- Follow instructions from your surgeon regarding caring for the incision.
- Keep your follow up appointments with your surgeon.

What are the Risks and Complications?

Complications can be medical (general) or specific to your surgery. Medical complications include those of the anesthesia and your child’s general well being. Almost any medical condition can occur so this list is not complete. Medical Complications that can occur with any surgery include:

(Refer fig. 21 in next page)
What are the Risks and Complications?

Allergic reaction to medications

Blood loss requiring transfusion with its low risk of disease transmission

Heart attack, strokes, kidney failure, pneumonia, bladder infections

Complications from nerve blocks such as infection or nerve damage

Serious medical problems can lead to ongoing health concerns, prolonged hospitalization, or rarely death.

Specific Complications related to Ochidopexy surgery are rare but can occur. It is important that you are informed of possible complications prior to electing to have your child undergo circumcision. These can include:

**Bleeding**

Bleeding is controlled with the use of pressure dressings. Blood clots can form in the scrotum and may require evacuation by your surgeon.

**Infections**

Infections are a risk after any surgical procedure but is uncommon after Orchidopexy. If your child develops a fever or other signs of infection including any increase in redness, swelling, or the presence of pus at the incision site, call your surgeon.

**Damage to Structures**

Damage to blood vessels or other surrounding structures can affect blood flow to the area and eventually lead to loss of the testicle. Rarely, the repair is unsuccessful and the testicle moves back out of the scrotum requiring a second surgery.
Disclaimer

Although every effort is made to educate you on Undescended testicle and take control, there will be specific information that will not be discussed. Talk to your doctor or health care provider about any concerns you have about Undescended testicle.

You must not proceed until you are confident that you understand this procedure, particularly, the complications.