Ultrasound - Scrotum



Ultrasound imaging of the scrotum uses sound waves to produce pictures of a male's testicles and surrounding tissues. It is the primary method used to help evaluate disorders of the testicles, epididymis (tubes immediately next to the testicles that collect sperm) and scrotum. Ultrasound is safe, noninvasive, and does not use ionizing radiation.

This procedure requires little to no special preparation. Leave jewelry at home and wear loose, comfortable clothing. You may be asked to wear a gown.

What is Ultrasound Imaging of the Scrotum?

Ultrasound imaging of the scrotum provides pictures of a male's testicles (http://www.radiologyinfo.org) and the surrounding tissues.

Ultrasound imaging is a noninvasive medical test that helps physicians diagnose and treat medical conditions. It is safe and painless. It produces pictures of the inside of the body using sound waves. Ultrasound imaging is also called sonography (http://www.radiologyinfo.org) . It uses a small probe called a transducer and gel placed directly on the skin. High-frequency sound waves travel from the probe through the gel into the body. The probe collects the sounds that bounce back. A computer uses those sound waves to create an image. Ultrasound exams do not use radiation (http://www.radiologyinfo.org) (x-rays (http://www.radiologyinfo.org)). Because ultrasound captures images in real-time, it can show the structure and movement of the body's internal organs. The images can also show blood flowing through blood vessels.

What are some common uses of the procedure?

Ultrasound imaging of the scrotum (http://www.radiologyinfo.org) is the primary imaging method used to evaluate disorders of the testicles, epididymis (tubes immediately next to the testicles that collect sperm made by the testicle) and scrotum.

This study is typically used to:

- determine whether a mass in the scrotum felt by the patient or doctor is cystic or solid and its location.
- diagnose results of trauma to the scrotal area.
- diagnose causes of testicular pain or swelling such as inflammation or torsion.
- evaluate the cause of infertility such as varicocele (http://www.radiologyinfo.org) .
- look for the location of undescended testis.

A sudden onset of pain in the scrotum should be taken very seriously. A common cause of scrotal pain is epididymitis (http://www.radiologyinfo.org) , an inflammation of the epididymis. It is treatable with antibiotics. If left untreated, this condition can lead to an abscess (http://www.radiologyinfo.org) or loss of blood flow to the testicles.

Ultrasound can often detect an absent or undescended testicle as well. It is estimated that approximately three percent of full-term baby boys have an undescended testicle. The testicle normally migrates from the abdomen down a short passage called the inguinal canal and then into the usual position in the scrotal sac before birth. If not present in the scrotal sac, the testicle may have stopped

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in the inguinal region, in which case the ultrasound examination will often see it. If the testicle has not left the abdominal cavity, it may not be seen by sonography. If a testicle is not detected, a urologist may be consulted in order to decide whether additional imaging such as an MRI is needed to determine its location. If the testicle is found to be in the inguinal region, it may be moved into the scrotum. If left in the abdomen too long, the testicle may become cancerous and may need to be removed.

Ultrasound can identify testicular torsion, the twisting of the spermatic cord that contains the vessels that supply blood to the testicle. Testicular torsion is caused by abnormally loose attachments of tissues that are formed during fetal development. Torsion commonly appears during adolescence, and less often in the neonatal period, and is very painful. Torsion requires immediate surgery to avoid permanent damage to the testicle (http://www.radiologyinfo.org) .

Ultrasound also can be used to locate and evaluate masses (lumps or tumors) in the testicle or elsewhere in the scrotum. Collections of fluid and abnormalities of the blood vessels may appear as masses and can be assessed by ultrasound. Masses both outside and within the testicles may be benign or malignant and should be evaluated as soon as they are detected.

Who interprets the results and how do I get them?

A radiologist, a doctor trained to supervise and interpret radiology exams, will analyze the images. The radiologist will send a signed report to the doctor who requested the exam. Your doctor will then share the results with you. In some cases, the radiologist may discuss results with you after the exam.

You may need a follow-up exam. If so, your doctor will explain why. Sometimes a follow-up exam further evaluates a potential issue with more views or a special imaging technique. It may also see if there has been any change in an issue over time. Follow-up exams are often the best way to see if treatment is working or if a problem needs attention.

What are the benefits vs. risks?

Benefits

- Most ultrasound scanning is noninvasive (no needles or injections).
- Occasionally, an ultrasound exam may be temporarily uncomfortable, but it should not be painful.
- Ultrasound is widely available, easy to use, and less expensive than most other imaging methods.
- Ultrasound imaging is extremely safe and does not use radiation.
- Ultrasound scanning gives a clear picture of soft tissues that do not show up well on x-ray images.
- Ultrasound provides real-time imaging. This makes it a good tool for guiding minimally invasive (http://www.radiologyinfo.org) procedures such as needle biopsies (http://www.radiologyinfo.org) and fluid aspiration.

Risks

- Standard diagnostic ultrasound (http://www.radiologyinfo.org) has no known harmful effects on humans.

What are the limitations of Scrotal Ultrasound Imaging?

Ultrasound of the scrotum is helpful for finding abnormalities such as masses in the scrotum or testicles. However, it does not always permit an exact diagnosis (i.e., the exact type of tissue a mass is composed of, especially when the mass is solid). Blood flow images of the testicles are not always reliable in determining the presence or absence of blood supply to a testicle that has twisted. When searching for an absent testicle, ultrasound may not be able to find it if it is located in the abdomen because gas filled bowel loops may block the view.

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