What is a Hydrocele?

A hydrocele is a collection of watery fluid around the testicle. This is a common problem in newborn males and usually goes away within the first year of life. When the testicle drops into the scrotum before birth, a sac from the abdominal cavity travels along with the testicle. Fluid from the abdominal cavity can then flow down into the scrotum and surround the testicle.

The sac usually closes off and the fluid is absorbed, but sometimes the sac persists (communicating hydrocele) or the fluid fails to be absorbed (noncommunicating hydrocele). In unusual instances the hydrocele fluid can be the result of an abdominal inflammation, or a testicular problem (injury, torsion, infection, tumor). Sometimes the hydrocele may not be in the scrotum, but higher up in the spermatic cord.
A persisting communicating hydrocele is evidence that a hernia can develop and should be fixed. A very large or symptomatic hydrocele should be fixed. If the hydrocele is suggestive of tumor or torsion, urgent exploration is performed. A large noncommunicating hydrocele persisting after 2 years of age is unlikely to go away and should also be fixed.

Correction of hydrocele in children is corrected through a groin incision and is very similar to a hernia operation.

What is a Hernia?
The extension of the abdominal sac that passes into the groin is called the processus vaginalis. This usually closes off by the time of birth. If it remains open, fluid can pass down into the groin and scrotum in boys to form a hydrocele. If the sac is wide enough it can allow other abdominal contents such as intestine or fat (also in girls, tube or ovary) to travel down. These structures can pass in and out of the hernia sac, but sometimes they get stuck (incarcerated hernia).

Inguinal hernias occur in both sexes, but are more common in boys, being found in 1-4%. The incidence is much greater in premature babies (30% for very low birth weights). Hernias favor the right side, but may occur on both sides.

The usual hernia is a lump or bulge in the groin or scrotum. Usually asymptomatic, the hernia can cause pain, fussiness, or even bowel obstruction. Although the hernia contents usually pass back into the abdominal cavity intermittently (reduction of the hernia), the sac itself does not disappear; therefore, a hernia should be fixed surgically. Most are repaired electively. Incarceration may cause much distress, and when this happens and the hernia cannot be reduced, it should be immediately corrected surgically. If a hernia
becomes strangulated, the involved intestine will die and have to be removed. This is a life-threatening situation.

**How are Hydroceles and Hernias corrected?**

These problems are corrected in children via a groin incision. For hydrocele we make certain there is no hernia sac (patent processus vaginalis) or underlying problem and then remove the watery fluid. The lining around the testicle is re-oriented to try to minimize the chances of recurrence. Complications include bleeding, infection, pain, and recurrence of the hydrocele.

A hernia is also approached through the groin where the sac is separated from spermatic cord vessels and vas deferens. The sac is then tied off where it originates from the abdominal cavity. Pediatric hernias (indirect inguinal hernias) are usually different from adult types (direct inguinal hernias) which tend to have a muscle weakness that must be fixed. Muscle repair is rarely necessary for pediatric hernias. Hernia complications, in addition to bleeding, infection and recurrence, include hydrocele formation, injury to spermatic cord vessels and damage to the vas deferens. With any groin or scrotal operation there is always a small chance that the testicle could be damaged or lost.
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