Inguinal Hernia in Children

- The processus vaginalis (PV) is a finger-like projection of peritoneum that is dragged down with the testis as it descends into the scrotum.
- Around the time of birth or shortly thereafter, the PV obliterates, leaving no communication between the peritoneal cavity and the inguinal canal or scrotum.
Inguinal Hernia in Children

• Unlike adults, whose hernias may also be due to a defect in the floor of the inguinal canal (a so-called “direct” hernia), 99% of pediatric groin hernias are due to a patent processus vaginalis (PPV) (an “indirect” hernia): the PV does not obliterate, leaving a potential space anywhere along its path in the inguinal canal all the way from the peritoneal cavity at the top to the scrotum at the bottom.

• Autopsy studies have shown that:
  • The incidence of PPV in infants is 80-94% but many close spontaneously in the 1st two years of life.
  • The incidence in adults is 20-30%.

• 60% of infants with unilateral hernias have a contralateral PPV.
  • <50% become clinical hernias: a PPV doesn’t mean a child will definitely develop a hernia.
Inguinal Hernia in Children

- A hernia occurs when a loop of bowel, or in girls, an ovary or fallopian tube, descends through the PPV, which is now called a hernia sac.
- The herniated organ may reside for variable periods in the sac until it spontaneously goes back, or “reduces” into the abdominal cavity or is reduced by the parent or physician.
Danger of an inguinal hernia

- When bowel, or anything else that is in the sac does not spontaneously reduce, and cannot be manually reduced, it is referred to as “incarcerated” or, in lay terms, stuck.

- If the blood supply to the bowel or ovary is compromised because it cannot be reduced, the hernia is called “strangulated” and is a surgical emergency.

- Recurrent episodes of incarceration before a hernia is repaired can cause repeated episodes of ischemia to the testis and can result in testicular atrophy.