Topics

- What is a hydrocele?
- Diagnosis of hydrocele
- Treatment of communicating hydroceles
- Treatment of non-communicating hydroceles
Communicating Hydroceles

- **Definition**
  - Hydrocele: accumulation of fluid in the tunica vaginalis around the testis in the scrotum
    - Most are non-communicating, meaning the processus vaginalis (the finger of peritoneum that is dragged down with the descending testis) was obliterated after the testis descended, leaving only the fluid-filled tunica vaginalis below
    - Affects 1-2% of males
  - Communicating hydrocele means there is a patent processus vaginalis: a tiny open channel is left between the hydrocele and the peritoneal cavity
Communicating Hydroceles

- Diagnosis
  - Often made by history: communicating hydroceles tend to increase and decrease with activity
    - Small in morning after being recumbent at night
    - Becomes larger through day with activity & upright position
    - Activities that increase intra-abdominal pressure (e.g., crying) will increase movement of fluid from the peritoneal cavity into the hydrocele below
Communicating Hydroceles

• Diagnosis
  • Physical Exam
    • Cord structures (vas and vessels) should be palpable at the level of the external ring in the groin, a key feature that differentiates a hernia from a hydrocele
    • Compressibility helps rule out tumor
    • Narrow diameter of PPV may not permit decrease in size of hydrocele with compression
  • Transilluminate scrotum (BEWARE! Air-filled bowel in a hernia sac can also transilluminate!)
Communicating Hydroceles

- Treatment
  - All communicating hydroceles should be repaired through an inguinal incision
  - Approach similar to herniorrhaphy (outlined next)
Communicating Hydroceles

- **Surgical Approach**
  - Inguinal incision, 1 cm or less in length
  - Spermatic cord identified
    - Structures may be isolated without opening the external ring in infants due to short distance between internal and external rings
  - Visualize hydrocele in anteromedial aspect of cord
    - Lies just beneath cremaster muscles
  - Hydrocele fluid distally is drained
  - High ligation of patent processus vaginalis at internal ring (like a hernia sac)
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- What if fluid remains in scrotum?
  - Prevent this by removing as much of the hydrocele sac as possible so it cannot close over and recur
  - Boys often have significant scrotal swelling after hydrocele repair: warn families of this so you don’t receive panicky phone calls at midnight!
- Treatment for recurrence (rare):
  - Unroofing of hydrocele sac surgically
  - May be drained percutaneously through scrotum
    - Risk to scrotal contents
Communicating Hydroceles

- Areas of controversy
  - Exploration of asymptomatic contralateral inguinal canal
    - Incidence of patent processus vaginalis = 48-63%
    - Incidence of clinically relevant inguinal hernia or hydrocele developing after unilateral repair =~15%
    - Risk of injury to contralateral structures
  - No consensus exists regarding standard of practice
Non-communicating Hydroceles

- **Treatment**
  - Usually spontaneously regress by 12-18 months of age
  - If large or tense, consider surgery
    - Unlikely to regress spontaneously
    - May be difficult to distinguish from hernia
  - Can observe to 12-18 months of age as long as there is no testicular compromise
    - If no regression consider surgery
References
