CT Children's CLASP Guideline

Inguinal Hernia

INTRODUCTION

An **inguinal hernia** is seen as a bulge in the inguinal region and/or scrotum. It typically results from a patent processus vaginalis leading to herniation of abdominal contents into the groin. In girls, the hernia may contain an ovary or fallopian tube, or in females with a disorder of sexual development, an undescended testicle. Primary inguinal hernia in children is a common, occurring in 1-5% of all newborns, with higher frequency in premature babies. It is more prevalent in boys than in girls. Hernias do not resolve with time, and they are generally repaired in an outpatient procedure. Hernias may become incarcerated or strangulated. These are medical emergencies.

The differential diagnosis for inguinal hernia includes hydrocele, undescended testis, varicocele, and lymphadenopathy. A hydrocele is a fluid collection that can occur anywhere on the path of descent of the testis or ovary. A varicocele is dilated pampiniform veins and more typically seen in adolescents. Ensuring the correct diagnosis and ruling out surgical emergencies is critical.

INITIAL EVALUATION AND MANAGEMENT

INITIAL EVALUATION:

- **History:**
  - Describe the bulge (location, how large)
  - How long has the child had the bulge?
  - Is bulge reducible?
  - If an infant, is he/she premature?
  - Does the size of the testis change over the course of the day (enlargement over course of day is a sign of communicating hydrocele)?
- **Physical Exam:**
  - Assess patient both lying flat and standing (if developmentally appropriate) and palpate inguinal area for a bulge. The following techniques may be helpful if you cannot see bulge or feel mass on exam:
    - While palpating, it may be helpful to ask the patient to blow into a balloon or glove to help increase intra-abdominal pressure
    - For an infant, may tickle to make fussy to increase intra-abdominal pressure
  - *How to distinguish inguinal hernia from hydrocele:*
    - Larger testis palpated than compared to other side, and it is not reducible
    - If unsure if hydrocele, can check if transluminates
    - This is important for children < 18 months of age, because hydrocele in this age group may be monitored clinically, while in older kids, it requires surgery for presumed diagnosis of communicating hydrocele
  - *How to distinguish hydrocele of the cord from incarcerated hernia:*
    - If a normal spermatic cord is palpable proximal to the mass, it may be a hydrocele of the cord
    - Usually not painful to palpation
    - Patient not typically in distress with a hydrocele (v. incarcerated hernia)
  - In teenage male, consider varicocele:

- Large, soft, scrotal mass ("bag of worms") on standing that is no longer palpable in the recumbent position

- **Red Flags:**
  - Signs of an incarcerated/strangulated hernia:
    - Patient uncomfortable or in distress and showing signs of pain
    - Hard, painful bulge that does not resolve with laying down for 30 minutes or pediatrician unable to reduce the mass
    - Abdominal, pain, nausea, vomiting, erythema of bulge are potential signs of strangulation

INITIAL MANAGEMENT:

- Determine if hernia is incarcerated/strangulated, and if concern for these, call One Call or Pediatric Surgery office for same-day Pediatric Surgery appointment during regular hours or send to ED on off hours.
- If a hydrocele is identified, this may not require surgery. Hydroceles should be monitored clinically, and if still present at 12-18 months of age, refer to Pediatric Surgery.
- For all other findings, provide reassurance and send routine referral to Pediatric Surgery (see "When to Refer" section below).
- Do not order ultrasound as this is not a helpful study for diagnosis.
- Offer patient/family information sheet (**Appendix A: Family Handout**).

WHEN TO REFER

All inguinal hernia(s) should be referred to surgery department for evaluation.

ROUTINE REFERRAL FOR:

- Reducible hernia
- Hydrocele persistent in child greater than 12-18 months
- Evidence of communicating hydrocele
- Hydrocele of spermatic cord
- Unsure of diagnosis (Hernia and hydrocele may be difficult to distinguish between, and if there is any uncertainty, refer to surgery for further assessment

EMERGENCY REFERRAL FOR:

Emergencies will be accommodated into the daytime office schedule if during regular office hours

- Suspected Incarceration/strangulation

HOW TO REFER

Referral to Surgery Department via CT Children's One Call Access Center
Phone: 833.733.7669 **Fax:** 833.226.2329
For more information on how to place referrals to Connecticut Children's, click **here**.
OR
Call Pediatric Surgery Department at :
Phone: 860.545.9520

Information to be included with the referral:

- No pre-consultation information is required

WHAT TO EXPECT	**What to expect from CT Children's Visit:** ▪ Confirmation of diagnosis ▪ Determination if surgery is necessary ▪ If physician and parents agree that surgery is appropriate, will schedule patient for ambulatory surgery (exceptions are ex-premature infants less than 55 conceptual weeks and term babies less than 44 weeks, who do require a post-operative hospital admission for 12 hours for apnea monitoring)