Sliding Hernias

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May 6th 2010
CASE PRESENTATION

- 66 YO M
- No PMH/PSH
- Enlarging right inguinal scrotal hernia x several years
- Painful but reducible
PHYSICAL EXAM

- AF VSS
- Gen Comfortable
- Abd no scars NT ND large right inguinal scrotal hernia reducible when in supine position
OPERATIVE FINDINGS

- Large partially reducible right indirect inguinal hernia
- Sac extending into the right scrotum
- Mobilized off the cord structures
OPERATIVE DETAILS

- Sac opened at level of internal ring
  - At the anteromedial aspect

- Bulge noticed from posterior aspect of sac
  - Bulge opened with cautery
  - Colonic mucosa and feces noted
OPERATIVE DETAILS

- Colotomy closed
  - 2 layer lembert interrupted 3-0 silk
  - Field copiously irrigated

- Modified Basini repair performed
POST OPERATIVE COURSE

- Patient admitted
- Kept NPO for 3 days until flatus
- POD#4-5 diet advanced as tolerated
- POD#5 patient discharged home
Sliding Hernia
WHAT IS A SLIDING HERNIA?

- Any hernia in which part of the sac is the wall of a viscus
- Approx 8% of all groin hernias
  - Incidence increases with age
COMPOSITION OF INDIRECT INGUINAL SLIDING HERNIAS

■ On right side
  ■ Cecum
  ■ Ascending colon
  ■ Appendix

■ On left side
  ■ Sigmoid colon

■ On both sides
  ■ Uterus, fallopian tube, ovary, ureter, bladder
DANGERS OF SLIDING HERNIA

- Sliding component usually found on posterior lateral side of the internal ring

- Opening of the sac can risk damage to the sliding contents

- Best approach to avoid injury to contents of sac is NOT TO OPEN THE SAC
EPIDEMIOLOGY

- 5-10% world population get abdominal hernias
- Inguinal 80%
  - #1 cause
    - Patent processus vaginalis
    - More common in males 7:1
    - Direct : Indirect 1:2
- Femoral 5%
  - More common in females 10:1
- 3rd most common cause of bowel obstruction in US
  - #1 adhesion #2 cancer
PRESENTATION

- Presents as a swelling in the groin
- Usually complain of a dull groin pain worse with straining
- Usually reduces when patient lies down
- Can be felt through the external inguinal ring
COMPLICATIONS

If left untreated

- Incarceration

- Obstruction

- Strangulation

Rare
ANATOMY OF INGUINAL CANAL

- Boundaries
  - Anterior
    - Ext oblique apon.
  - Posterior
    - Transversalis fascia
  - Superior
    - Int oblique/transversus
  - Inferior
    - Inguinal ligament
ANATOMY OF INGUINAL CANAL

Contents

- Spermatic cord
- Round ligament
- Ilioinguinal nerve
- Genitofemoral nerve
- Iliohypogastric nerve
DIRECT INGUINAL HERNIA

- Within Hesselbach’s triangle
  - Medial- rectus
  - Superolateral- inferior epigastric vessels
  - Base- inguinal ligament
INDIRECT INGUINAL HERNIA

- Originate lateral to triangle
- Through internal ring
- Sac is usually anteromedial
NON-MESH REPAIRS

- **Basini**
  - First described in 1887

- **McVay**
  - Popularized in the 1940’s

- **Shouldice**
BASINI REPAIR

- Open transversalis fascia
- Suture repair transversalis, transversus abdominus, internal oblique to inguinal ligament
- Can be used when mesh is contraindicated
McVAY REPAIR

- Cooper ligament repair
- Suture repair
  - transversus and transversalis to Cooper ligament
- Lateral to femoral v.
  - suture iliopubic tract to transversus and transversalis
- Obliterates the femoral space
- Relaxing incision used
SHOULDICE REPAIR

- Open transversalis
- Overlap fascia in 2 rows of running suture
- 2 rows of suture to transversus to inguinal ligament
“TENSION FREE’ MESH REPAIR

- Lichtenstein
- Gilbert plug and patch

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LICHTENSTEIN REPAIR

- Large mesh placed
  - 2cm medial to tubercle to ASIS
- Slit made in lateral part of mesh
  - Encircles cord structures
- Upper part is sutured to lower part and inguinal ligament
GILBERT PLUG AND PATCH

- Plug created and placed into defect
- Secured to internal ring
- Patch is optional
  - Functions similar to Lichtenstein repair
LAPAROSCOPIC APPROACHES

■ TEP
  ■ Totally extraperitoneal

■ TAPP
  ■ Transabdominal preperitoneal
COMPLICATIONS OF REPAIR

- Recurrence
- Chronic pain
  - Up to 10%
- Ischemic orchitis
  - 1%
- Infected mesh
  - As high as 4% of all repairs
- Vas injury
- Vascular injury
  - Epigastrics
  - Iliacs
- Viscus injuries
RECURRENT RATES

- Anywhere from 1-15%
- Higher with nonmesh repairs
  - 50-75% decreased recurrence rate with mesh
Open Mesh versus Laparoscopic Mesh Repair of Inguinal Hernia *Leigh Neumayer, M.D. et al*

- NEJM 2004 Vol 350
- Randomized prospective controlled trial 2164 pts with 2 yr follow-up
- Compared primary repair laparoscopic vs Lichtenstein
- Higher recurrence rate in laparoscopic group (10 vs 4%)
- Learning curve of 250 laparoscopic cases
- Less post op pain and faster return to work in laparoscopic group

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REFERENCES

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