Totally Extraperitoneal Repair of hernia

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TEP

Totally Extra Peritoneal Repair
Anatomy

The inferior epigastric vessels constitute the main landmark.
The position of the iliac vessels should be noted to avoid injury.
1. Pectineal ligament
2. Rectus abdominis muscle
3. Epigastric vessels
4. Internal ring
5. Iliopubic tract
6. Cutaneous nerves on psoas muscle
7. Urogenital fascia
8. Reflected peritoneum
Anatomy Direct Hernia

1. Hernia site
2. Inferior epigastric vessels
3. Testicular vessels
4. Ductus deferens
Anatomy Indirect Hernia

1. Inferior epigastric vessels
2. Hernia site
3. Inferior epigastric vessels
Anatomy Femoral Hernia

Inguinal ligament

Hernia site

Femoral vein
Danger Area

1. The Triangle of Pain: Potential for nerve injury or entrapment.
2. The Triangle of Doom: Potential injury to the great vessels.
3. Femoral vessels
4. Cutaneous nerves
3D Anatomy

1. Skin
2. Fatty tissue
3. Linea alba
4. Pubic symphysis
5. Urinary bladder
6. Internal ring
7. Muscles of the abdominal wall:
   a) External oblique muscle
   b) Internal oblique muscle
   c) Transversus abdominis muscle
3D Anatomy

1. Incised anterior layer of rectus sheath
2. Posterior layer of rectus sheath
3. Arcuate line
4. Peritoneum
Port Position
Creation of Plane

1. Midline
2. Hernia

15 mm skin incision inferior to the umbilicus, slightly towards the side of the hernia.
Creation of Plane

Incise anterior sheath, extending 10 mm to hernia side.
1. Midline
2. Hernia

Anterior rectus sheath
Steps of TEP
Approach to pre-peritoneal space
Balloon Dilatation
Balloon Dilatation

Left hand directs balloon inflation
1. The surgeon’s left hand guides the balloon into position.
Removal of Balloon

Potential Cavity
Insufflation
View after insufflation

Internal view after balloon removal
1. Inferior epigastric vessels
2. Rectus abdominis muscle
3. Pubic symphysis
4. Urinary bladder
5. Collapsed peritoneum
Secondary Ports
Clearing The Ring

1. Cutaneous nerves
2. Genital branch of genitofemoral nerve
3. Peritoneum followed from lateral to internal ring
4. Peritoneum has been dissected down
5. Inguinal triangle
6. Internal ring
7. Femoral vessels in the Triangle of Doom
8. Cutaneous nerves in the Triangle of Pain

Direct Hernia
Clearing The Ring

1. Hernia sac
2. Internal ring
- polypropylene mesh (Prolene);
- mesh must be at least 15 by 13cm;
- 2 meshes are needed for bilateral hernias;
- a horizontal line is drawn on the mesh with a sterile marker pen to aid orientation.
Introduction of Mesh
OPERATIVE PROCEDURE
TEP
OPERATIVE PROCEDURE
TEP Right Side
TEP Left Side
Thanks

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