Approaches to Ventral Hernia Repair

Praz Patcha, MD
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Case

37F referred by GYN for incisional hernia s/p prior fibroidectomy. Planned for simultaneous repair during elective fibroidectomy.

PMH: Denies
PSH: fibroidectomy
Case

Exam: Inferior midline scar with multiple palpable, reducible incisional hernias

OR: Grossly attenuated fascia, with multiple small defects identified.

Primary repair suture repair with onlay mesh.
Case

POD 1: Resumed bowel function.

POD 2: Advanced diet.

POD 3: Discharged to home
Overview

• The Abdominal Wall

• Types of hernias

• Types of Repair

• Data
Section above arcuate line

- Aponeurosis of external oblique muscle
- Aponeurosis of internal oblique muscle
- Aponeurosis of transversus abdominis muscle
- Anterior layer of rectus sheath
- Rectus abdominis muscle
- Linea alba
- Skin
- External oblique muscle
- Internal oblique muscle
- Transversus abdominis muscle
- Falciform ligament
- Peritoneum
- Extraperitoneal fascia
- Transversalis fascia
- Posterior layer of rectus sheath
- Subcutaneous tissue (fatty layer)
Types of Ventral Hernias

- Epigastric
- Umbilical
- Hypogastric
- Incisional
Incisional Hernias

- 15-20% of abdominal wall hernias
- 11-23% of abdominal incisions
- up to 30% with wound infection, obesity
Repairs (Open)

- Suture
- Mesh
- Component Separation
Rives-Stoppa – “Sublay or Retrorectus”
[Intervention Review]

Open surgical procedures for incisional hernias

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DATA AND ANALYSES

Analysis 1.1. Comparison 1 Suture repair versus mesh repair, Outcome 1 Recurrence.

Analysis 1.2. Comparison 1 Suture repair versus mesh repair, Outcome 2 Pain.

Analysis 1.3. Comparison 1 Suture repair versus mesh repair, Outcome 3 Satisfied with cosmetic result.

Analysis 1.4. Comparison 1 Suture repair versus mesh repair, Outcome 4 Infection.

Analysis 2.1. Comparison 2 Lightweight mesh versus standard mesh in sublay position, Outcome 1 Recurrence.

Analysis 2.2. Comparison 2 Lightweight mesh versus standard mesh in sublay position, Outcome 2 Pain.

Analysis 2.3. Comparison 2 Lightweight mesh versus standard mesh in sublay position, Outcome 3 Deep infection.

Analysis 2.4. Comparison 2 Lightweight mesh versus standard mesh in sublay position, Outcome 4 Hospital stay in days.

Analysis 2.5. Comparison 2 Lightweight mesh versus standard mesh in sublay position, Outcome 5 Operation time in hours.

Analysis 3.1. Comparison 3 Onlay versus sublay mesh, Outcome 1 Recurrence.

Analysis 3.2. Comparison 3 Onlay versus sublay mesh, Outcome 2 Operation time in minutes.

Analysis 3.3. Comparison 3 Onlay versus sublay mesh, Outcome 3 Hospital stay in days.

Analysis 3.4. Comparison 3 Onlay versus sublay mesh, Outcome 4 Overall complication rate.

Analysis 3.5. Comparison 3 Onlay versus sublay mesh, Outcome 5 Postsurgical pain.

Analysis 4.1. Comparison 4 Mesh (polypropylene) versus skin autograft in onlay position, Outcome 1 Recurrence.

Analysis 4.2. Comparison 4 Mesh (polypropylene) versus skin autograft in onlay position, Outcome 2 Pain.

Analysis 4.3. Comparison 4 Mesh (polypropylene) versus skin autograft in onlay position, Outcome 3 Satisfied with cosmetic result.

Analysis 4.4. Comparison 4 Mesh (polypropylene) versus skin autograft in onlay position, Outcome 4 Deep infection.

Analysis 5.1. Comparison 5 Onlay mesh repair versus double mesh intraperitoneal repair, Outcome 1 Recurrence.

Analysis 5.2. Comparison 5 Onlay mesh repair versus double mesh intraperitoneal repair, Outcome 2 Seroma.

Analysis 5.3. Comparison 5 Onlay mesh repair versus double mesh intraperitoneal repair, Outcome 3 Superficial wound infection.
Findings (Pooled)

- 33% vs 16.4% recurrence for suture repair vs for mesh repair
- 0% vs 10.1% infection rate for suture vs mesh
Findings (Pooled)

- No significant difference in recurrence between onlay vs sublay position
Other Data

- **Reduced operative time** for Onlay compared to Sublay

- **Surgical drains kept longer** for Onlay compared to Sublay
Incisional hernias will occur in approximately what percentage of laparotomies?

a. 1-5%
b. 11-23%
c. 34-40%
The Rives-Stoppa repair places the mesh into which space of the abdominal wall?

a. anterior sheath / rectus
b. rectus / posterior sheath
c. posterior sheath / preperitoneal
Thank you