A Case Presentation and Discussion on Hernia

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General Data

54 y.o, Female,
from Sta Ana Manila

Chief Complaint

Abdominal pain
**History of Present Illness**

1 year PTA  
On & off bulging abdominal mass

6 hours PTA  
Sudden onset of abdominal pain with protruding mass at the right abdominal region

1 hour PTA  
1 episode of vomiting with increasing severity of abdominal pain becoming generalized

Admitted at OMMC

**Past Medical History**

- S/P Paramedian Appendectomy  
  (1997 at East Avenue Medical Center)

**Personal and Social History**

- Non smoker
- Non Alcoholic drinker

**Physical Examination**

- Conscious, coherent, NICRD
- BP = 110/70  HR = 89
- RR = 25  T° = 37.2°
- HEENT: Pink palpebral conjunctiva, anicteric sclerae
- C & L: Symmetrical chest expansion  equal breath sounds
- Heart: Normal rate, regular rhythm

**Abdomen**

- Flabby, soft
- Hypoactive bowel sounds
- (+) Protruding mass on the previous paramedian incision
- (+) Direct tenderness all over

**Rectal**

- Good sphincteric tone, Full rectal vault, non collapsed with feces on tactating finger
Salient Features

- 54 y.o, Female
- 1 yr On & Off bulging mass
- S/P Paramedian Appendectomy
- Sudden onset of abdominal pain
- (+) Vomiting
- (+) Protruding mass on the previous paramedian incision
- (+) direct tenderness all over

Pretreatment Diagnosis

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>CERTAINTY</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMARY Incarcerated Incisional Hernia without bowel perforation</td>
<td>85%</td>
<td>surgical</td>
</tr>
<tr>
<td>SECONDARY Incarcerated Incisional Hernia with bowel perforation</td>
<td>15%</td>
<td>surgical</td>
</tr>
</tbody>
</table>

Paraclinical diagnostic procedure

Do I Need A Paraclinical Diagnostic Procedure?

No.
Goal of treatment

- Reduction of hernial contents
- Excision of hernial sac
- Repair of the Fascial defect
- Prevent complications

Treatment Options

<table>
<thead>
<tr>
<th>BENEFIT</th>
<th>RISK</th>
<th>COST</th>
<th>AVAILABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN WITHOUT MESH</td>
<td>+++ RR= 23-48%</td>
<td>Infection</td>
<td>P 2000</td>
</tr>
<tr>
<td>OPEN WITH MESH</td>
<td>+++ RR= 20-34%</td>
<td>Graft rejection</td>
<td>P 6000</td>
</tr>
</tbody>
</table>

Pre-Operative Preparation

- Give psychosocial support
- Secure Consent
- Optimize condition of patient
  - Nasogastric tube and foley catheter placed
  - Fluid resuscitation
  - Pre-op monitoring
  - Antibiotic
  - Screening of other condition that will interfere with treatment
- Prepare materials

Operative Technique

- Patient supine under GA
- Asepsis antisepsis
- Sterile drapes placed
- Paramedian incision Following previous incision carried down to the peritoneum
- Normal Fascia(Anterior rectus sheath) dissected and exposed on both medial and lateral side
- Intraop findings noted
Operative Findings

Loose and dense adhesion of the omentum on the anterior peritoneal wall. The Fascia of the previous incision site was noted to be disrupted with web like healing formation.

Operative Findings

Trapped segment of ileum in its small neck (2cm).

Operative Technique

- Release of incarcerated segments
- Excision of Hernial sac
- Closure of fascial defect with PDS O suture

Operative Technique

- Hemostasis assured
- Instrument, needles and sponge checked
- Layer by layer closure
- Dry sterile dressing
Operation
Exploratory Laparotomy
Primary Repair of Incarcerated Incisional Hernia

Final Diagnosis
Incarcerated Incisional Hernia
S/p Paramedian Appendectomy
S/P Repair of Incisional hernia

Post-op Care

1st POD  →  NGT maintained
           →  Hydration continued

2nd POD  →  Catheter removed
           →  NGT removed

3rd POD  →  IVF consumed
           →  Diet as tolerated
           →  Shifted to oral meds

5th POD  →  Discharged

Follow-up

• Follow up after 1 week
• Monitor for any complications
Prevention and Health

• Anticipate complications
  – Avoid infection
  – Avoid dehiscence
  – Bleeding

Sharing of Information

What is a Hernia?

• A hernia is a protrusion of an organ or tissue through a hole
How do Hernias occur?

- Insicional hernia
- Infection
- Steroids
- Abnormal inc in intra abdominal pressure
- Malnutrition
- Physical exertion
- Obesity

Where do hernias occur?

- A hernia can develop at any place whether in a normal opening, an abnormal opening or a potential opening.

Normal opening - would be the hole of the esophagus that passes through on its way from the chest to the abdomen.

Abnormal opening - is one that results from an incision.

Potential openings - result from the developmental process and are sites which at one time were open. These sites should have closed during normal development.

  e.g  Inguinal
  Umbilical

Can a hernia go away by itself?

- No, In fact it will get worse with time.

- The constant pressure on the area makes the hernia get bigger. This leads to more frequent, more intense and longer periods of discomfort.
Is there any treatment for a hernia other than surgery?

- A truss is a belt with a large pad on it that applies pressure to the site of the hernia with the aim of keeping the bulge from popping out.
- Overall, a truss is not a good idea even though it may at times work.

Why should I get it repaired?

- Main reason to have your hernia repaired is that there is always a chance that intestine will get trapped in the hernia and not be able to get out.

Are there different types of surgery to repair an incisional hernia?

Open surgery
  - with mesh
  - without mesh

Laparoscopy
  - minimal post-operative discomfort
  - Few restrictions on activity
  - less hospital stay

When can I resume normal activities after hernia surgery?

- With the exception of heavy lifting and vigorous exercise you can resume normal activities, including driving, walking and sexual activity.
- Generally, you will be able to resume normal vigorous exercise and heavy lifting in 4 to 6 weeks.
Phases of wound Healing

Inflammatory phase
- 4-6 days
- removal of bacteria and necrotic tissue
- wound has no tensile strength
- integrity dependent on suture

Fibroplastic phase
- regains tensile strength by bridging of collagen fibers

References


Questions–MCQ
1. After hernia repair, when will the 50th percentage of tissue strength be achieved?
   a. 1 week
   b. 2-3 weeks
   c. 1-2 months
   d. 3 years

Questions–MCQ
2. What is the most common type of incision that is more prone to develop hernia?
   a. Transverse
   b. Midline
   c. Mc Burneys
   d. Kocher

Questions–MCR
3. Which of the following factors contribute to the development of Incisional hernia?
   1. Infection
   2. Chemotherapy
   3. Malnutrition
   4. Smoking

Questions–MCR
4. Which of the following are the advantages of doing laparoscopy in Incisional hernia repair?
   1. Minimal post-operative discomfort
   2. Few restrictions on activity
   3. Less hospital stay
   4. Easy to perform
Questions–MCR

5. Which of the following are true regarding Inflammatory phase of healing?
   1. Occurs in 4-6 days
   2. Stage of necrotic tissue removal
   3. Wound has no tensile strength at this time
   4. Integrity of the tissue is entirely dependent on the suture