STANDARD TREATMENT WORKFLOW (STW)

Incisional /Ventral Hernia

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Standard Treatment Workflow (STW)
INCISIONAL/ VENTRAL HERNIA
ICD-10-K43.9

Symptoms:
1) Swelling on anterior abdominal wall
2) Cough impulse
3) Reduces on lying down (especially during early phase)

Severe local pain or generalized colicky pain
Generally indicative of complications:
- Obstruction
- Incarceration
- Strangulation

History of surgery at same site:
No
- Primary Ventral hernia
- Epigastric hernia
- Umbilical hernia
- Paraumbilical hernia

Yes
- Incisional Hernia
Singh R, et al.: Incisional /Ventral Hernia

**Standard Treatment Workflow (STW)**

**INCISIONAL/VENTRAL HERNIA**

**ICD-10-K43.9**

**Symptoms:**
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- Generally indicative of complications:
  - Obstruction
  - Incarceration
  - Strangulation

**History of surgery at same site**

- Yes: incisional Hernia

**Investigate if:**
- Doubtful diagnosis

- USG/CT scan to determine accurate number and size of defects

- Mesh hernioplasty

**Defect size > 2 cm**
- Mesh hernioplasty

**Defect size ≤ 2 cm**
- Primary anatomical closure

**RED FLAG SIGNS NEEDING REFERRAL TO HIGHER CENTRE**

1. Large hernias > 10 cm, requiring component separation
2. Parastomal hernias
3. Comorbidities
4. Loss of domain
5. Non-availability of mesh, for hernias > 12 cm in size - to be checked

**POST OP COMPLICATIONS**

- Infection, including mesh infection
- Skin necrosis
- Recurrence

**CLINICAL EVALUATION**

1. Swelling on anterior abdominal wall
2. Cough impulse
3. Reduces on lying down
4. Severe local pain or generalized colicky pain or fewer generally sign of complications

- Colicky abdominal pain and inreducible hernia intestinal obstruction. Immediate surgery for relief of obstruction. Hernia repair may or may not be done at same time
- Local redness and severe pain with fever: strangulation. Immediate surgery is needed, and the hernia repair should be deferred for a later date

5. Rule out other diseases or complications on history, particularly related to respiratory system (as raised intra-abdominal pressure can worsen the respiratory condition)

6. Features of swelling: Reducibility of hernia, size and number of defects

**MANAGEMENT**

- In general, ventral hernias should be repaired, as unrepaired hernias are at risk of life-threatening complications.
- Exceptions: untreated acities especially with portal hypertension, severe comorbidities precluding safe surgery, large hernias where repair may cause more morbidity such as bowel injury.
- Small median primary hernias less than 2cm diameter may be closed primarily (anatomical repair). Larger hernias and all incisional hernias should undergo mesh reinforcement

**CHOICE OF REPAIR**

<table>
<thead>
<tr>
<th>DEFECT SIZE</th>
<th>PROCEDURE</th>
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<tbody>
<tr>
<td>&lt; 2 cm</td>
<td>Anatomical repair, IPOM (Open Intraperitoneal onlay mesh)</td>
</tr>
<tr>
<td>2-4 cm</td>
<td>IPOM, open sublay repair, onlay repair</td>
</tr>
<tr>
<td>4-6 cm</td>
<td>IPOM plus, open sublay repair, onlay repair</td>
</tr>
<tr>
<td>More than 8 cm</td>
<td>Component separation will be required. Can be anterior component separation or posterior component separation, depending on available expertise. Bitor can be used as an adjunct in case of loss of domain</td>
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<tr>
<td>Subxiphoid hernias</td>
<td>Mesh overlap will extend below diaphragm in case of IPOM or extraperitoneal repairs</td>
</tr>
<tr>
<td>Suprapubic hernias</td>
<td>Mesh should extend behind pubic bones in case of extraperitoneal repair. IPOM should be done after dividing peritoneum so that lower end of mesh is in retroperitoneal space</td>
</tr>
<tr>
<td>Parasomal hernia</td>
<td>If stoma can be closed, then perform delayed repair. In case of permanent stoma, a Sugarbaker technique is generally advisable</td>
</tr>
</tbody>
</table>

**KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES**

- Refer to higher centre if defect size > 6 cm as it might need component separation
- Uncommon site, eg subxiphoid, suprapubic, large lateral hernias
- Loss of domain
- Laparoscopic hernia repair suitable for:
  - Defect size ≤ 4 cm
  - Absence of skin complications

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