Repair Of Abdominal Wall Defects (Inguinal Hernia Repair And Management).

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Abstract:
Sixteen patients were included. Direct in-hospital costs were higher for unilateral EH. Direct out-of hospital costs were lower after EH in some studies. Indirect costs were lower for EH. Total costs were higher for EH in three studies and lower in one study. With EH, QoL was better, pain was less, operating time was longer and time return to work and other activities was shorter.

tension-free meshplasty and herniorrhaphy are safe, simple andapplicable even in elderly patients after adequate preoperative assessment and optimization. Although associated with longer hospital stay, the mortality rate is nil and complication as well as recurrence rate is low. Hence, timely repair is necessary in elderly patients even in those with comorbid conditions.

Key word: Abdominal, Repair, Hernia, Inguinal.

Introduction:
Hernia is derived from the Latin word for rupture (1). A hernia is defined as an abnormal protrusion of an organ or tissue through a defect in its surrounding walls. Although a hernia can occur at various sites of the body, these defects most commonly involve the abdominal wall, particularly the inguinal region (1).

Hernia surgery is one of the earliest forms of surgery and various techniques of hernia repair have been described. The ideal treatment of inguinal hernia should be well defined and should be the least traumatic as regards to both the requested type of anesthesia and the operative technique, least expensive, least peri- and postoperativemorbidity, the chosen technique should also be the easiest to learn and perform and the positive results should be the most reproducible (2, 3).

Abdominal wall hernias are common, with a prevalence of 1.7% for all ages and 4% for those aged over 45 years. Inguinal hernias account for 75% of abdominal wall hernias, with a lifetime risk of 27% in men and 3% in women. (4) Repair of inguinal hernia is one of the most common operations in general surgery, with rates ranging from 10 per 100,000 of the population in the United Kingdom to 28 per 100,000 in the United States. (5) In 2001-2 about 70,000 inguinal hernia repairs (62,969 primary,
4939 recurrent) were done in England, requiring more than 100 000 hospital bed days. Ninety-five per cent of patients presenting to primary care are male, and in men the incidence rises from 11 per 10 000 person years aged 16-24 years to 200 per 10 000 person years aged 75 years or above. (6).

Fig. (1) : showed the inguinal hernia human.

Inguinal Hernias Present?

Inguinal hernias present with a lump in the groin that goes away with minimal pressure or when the patient is lying down. Most cause mild to moderate discomfort that increases with activity. A third of patients scheduled for surgery have no pain, and severe pain is uncommon (1.5% at rest and 10.2% on movement). (7) Inguinal hernias are at risk of irreducibility or incarceration, which may result in strangulation and obstruction; however, unlike with femoral hernias, strangulation is rare. National statistics from England identified that 5% of repairs of primary inguinal hernia were emergency operations in 1998-9. Older age and longer duration of hernia and of irreducibility are risk factors for acute complications. Gallegos and colleagues studied the presentation of inguinal hernias with a “working diagnosis of strangulation.” Only 14 of their 22 patients with an acute hernia had compromised tissue at operation, with one of 439 patients requiring bowel resection. (8) Though the study numbers are small, these findings emphasise the rarity of strangulation. A recent larger study estimated the lifetime risk of strangulation at 0.27% for an 18 year old man and 0.03% for a 72 year old man. (9, 10).

Inguinal Hernia Signs and Symptoms

You could have a direct inguinal hernia if you:

- Hurt when you cough, bend, or lift something heavy
- Feel pressure, weakness, heaviness, or a dragging sensation in your groin
- Have swelling around your testicles
- Feel a burning or aching sensation at the hernia’s bulge
You may be able to gently push the bump back up into your abdomen to relieve some of the discomfort.\(^{11, 12}\)

**Inguinal Hernia Causes and Risk Factors**

A baby can get an indirect inguinal hernia if the lining of their abdomen doesn't fully close while they're developing. What's left is an opening at the upper part of the inguinal canal. That's where a hernia can take shape.

Older adults usually get a direct inguinal hernia because the muscles of their abdominal wall can weaken.\(^{13}\)

Women rarely have this type of hernia. The broad ligament of the uterus is right behind the abdominal wall, which supports it and shields the inguinal canal.

Men don't have that barrier, so stress and gradual weakening of their abdominal muscles over time make it more likely something can push through to the inguinal canal. \(^{14}\).

**EPIDEMIOLOGY**

There are more than 600,000 hernia repairs every year in the United States. 5% of the population will develop an abdominal hernia; the prevalence, however, may even be higher.\(^{15}\).

**PATHOGENESIS**

The development of an inguinal hernia is multifactorial. In case of a congenital pathogenesis a preformed opening is caused by incomplete closure of the abdominal wall or in case of acquired hernia it is caused by a dehiscence of the fascias accompanied by a loss of abdominal wall strength. Etiologic factors may be increased intra-abdominal pressure or changes in the connective tissue.\(^{16}\).

**DIAGNOSIS**

Diagnosis of classic inguinal hernia is mostly straightforward using physical and ultrasound examination. CT-scan, MRT, x-rays are not recommended for routine use.\(^{16}\). The differential diagnosis includes mainly disorders of the groin region.\(^{15}\).

**Results and discussions:**

Inguinal hernia repair was performed in 60 patients and all the patients were both male and female. Patient demographics and clinical characteristics are tension free meshplasty was performed in 47 patients with uncomplicated inguinal hernia and herniorrhaphy was performed in the remaining 13 patients (out of the ten patients, seven were complicated hernias and three patients were too poor to afford a mesh, hence herniorrhaphy had to be done). All patients were above 40 years of age, and the most representative age group was from 52-60 years, with 29 patients. The oldest patient was 73 years old. Direct hernia was seen in 32 patients (54.13\%) and indirect hernia was seen in 28 (41.46\%) patients. In 36 patients (69.14\%) the hernia was on the right side, in 19 patients (21.2\%) it was on the left side and in five patients (11.67\%), it was bilateral. Amongst 60 patients of inguinal hernia, 50 were uncomplicated (45 unilateral and five bilateral) and seven patients presented as complicated inguinal hernia; and of the seven complicated cases, obstruction was present in three patients, strangulation were seen in three patients and Richter’s hernia in one patient.\(^{17, 18}\).
Most studies reported on direct in-hospital costs. In some cases, a detailed analysis was made, including, for example, the actual instruments that were used and the grade of staff employed; at the other end of the spectrum, a general rate was given for OR time with the usually used disposable instruments. Because herniorrhaphy frequently is performed in daycare surgery, hospital stay is often left out of the equation. The results for direct in-hospital costs.(19, 20).

**Postoperative Care**

The current standard of care after hernia repair is general wound care. The length of required inactivity varies greatly based on the surgeon’s preference, but activity is usually permitted within two to four weeks for laborers and within 10 days as tolerated for professionals.(21,22).

**Table (1): showed the Patient demographics and clinical characteristics**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Variable</th>
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<tbody>
<tr>
<td>Age</td>
<td>&gt;60</td>
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<tr>
<td>Number of patients</td>
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<td>Gender : Male</td>
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<tr>
<td></td>
<td>Female</td>
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<td>Emergent repairs</td>
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<td>Elective repairs</td>
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<td>Recurrent hernias</td>
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**References :**


