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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

EVALUATION OF OPEN "TENSION-FREE" HERNIOPLASTY Of Inguinal Hernais

Thesis

Submitted for partial fulfillment of
Master Degree in General Surgery

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1999-2000

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Acknowledgement

First and formost, I feel always indebted to GOD, the kind and merciful.

I would like to express my deepest gratitude and sincerest thanks to Prof. Dr. Gamal Sayed Saleh, prof. of General Surgery, El-Minia University for his kindness, advice and continual encouragement thrcughout the whole work.

My thanks and gratitude to Dr. Hussein Mousa Atta, lecturer of General Surgery, El-Minia University for his contineous honest guidance and advice throughout this work.

My thanks and gratitude to Dr. Younis Naguib Ahmad, Consultant of General Surgery, El-Minia University Hospital for his guidance and continual encouragement to complete this work.

INTRODUCTION
&
AIM OF THE WORK

Introduction

Diminshed strength of the abdominal wall due to hereditary deficiency, debility, weight loss and aging was recognized as an additional causal factor to the mechanical (exertion and straining) causation of inguinal hernia as far back as 1804 by Cooper *(Abrahamson, 1995)* .

In 1893, Halsted warned of the danger of tension on the suture line by referring to "no tension" as one of the great principles of surgery *(Barth et al., 1998)*.

The critical reappraisal of conventional hernioraphy procedures is leading to a new understanding of the pathology of groin hernias and the causes of their surgical failure. There is morphological and biochemical evidence that adult male inguinal hernias are associated with imparied hydroxylation of prolene. These changes lead to wekening of the fibroconnective tissue of the groin and development of inguinal hernias to use this aleady defective tissue, especially under tension, is a violation of the most basic principles of surgery. Furthermore, the tension resulting from approximation of the transverse tendineous structures such as the inguinal ligament or iliopublic tract results in widening of the femoral ring and the development of iatrogenic femoral hernias.

In open tension-free hernioplasty, instead of suturing anatomical structures that are not in apposition, the entire inguinal floor is reinforced by a sheet of prosthesis that extends well beyond Hessebach's triangle in order to provide sufficient mesh-tirsue interface. The procedure is both therapeutic and prophylactic, therefore it protects the entire susceptible region of the groin to herniation from all future mechanical and metabolic adverse effects. The procedure is safe, simple, effective, economical and without any side effects or the risk of uninary retention *(Amid and Lichtenstein 1997)*.

In 1989, Lichtenstein and Colleagues reported their use of this prosthetic screen onlay technique, the "tension-free hernioplasty" in 1000 patients with minimal complications and a zero recurrence rate after a follow-up of between 1 and 5 years (Lichtenstein, 1992).

Unlike surgeons who had reserved prosthetic mesh for "difficult" cases, Lichtenstein was proposing its routine use for all groin hernias.

Operative Technique

Skin incision is deepened down to the external oblique apponeurosis. After opening the external oblique the spermatic cord is mobilized in the usual way.

Direct sacs are inverted and imbricated using non absorpable suture to flatten the posterior wall. Indirect sacs are dissected from the cord up to the extrapeitoneual fat and then excised or inverted.

<u>The important technical points of the operation include:</u>

1. Epidural anaesthsia.
2. Ensuring an adequate size of the mesh.
3. Attachment of the inferomedical corner of the mesh well overlapping the pubic tubercle.
4. Attaching the mesh with a loose continuous suture, tight suturing leads to tissue necrosis and pain.
5. Overlaping the lateral tails of the mesh to provide snug fit around the cord.
6. Encouragement of early mobilization.

Aim of the work

Is to evaluate open "tension-free hernioplasty" in 30 patients with short term follow up.

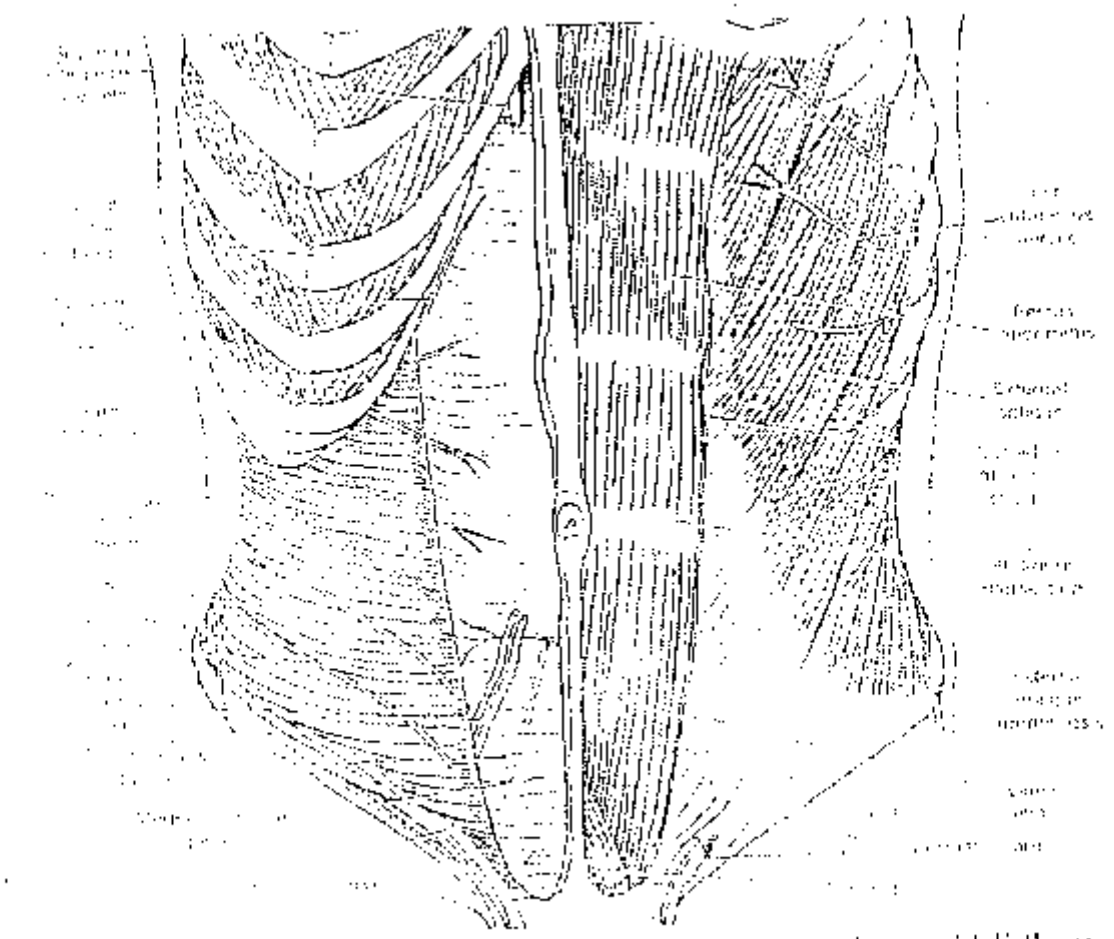
ANATOMY

Anatomy Of The Inguinal Region

The abdominal wall in the inguinal region is composed of the following layers from outside inwards:

1. *Skin.*
2. *Superficial fascia containing fat.*
3. *External oblique aponeurosis, including the inguinal, lacunar and reflected inguinal ligaments.*
4. *Spermatic cord.*
5. *Internal oblique muscle, transversus abdominis muscle and aponeurosis modified to conjoint tendon.*
6. *Transversalis fascia associated with Transversalis fascia sling, the pectinate ligament (Cooper), the iliopublic tract, and the deep inguinal ring.*
7. *Preperitoneal connective tissue and fat.*
8. *Peritoneum (Fig. 2.1)* ***(Mc Vay, 1974).***

There are 2 groups of structures, one a mirror image of the other, skin to aponeurosis and aponeurosis to Peritoneum.



Fig(2.1): Antero lateral abdominal muscles. The right rectus and pyramidalis have been removed to show the posterior wall of the rectus sheath, the arcuate line and the ends of the intercostal nerves.

The superficial fascia:

The superficial fascia is divided into a poorly developed superficial layer called Camper's fascia and a deeper connective tissue layer called Scarpa's fascia, the superficial fascia continues downwards over the penis, scrotum, perineum, thigh and buttoks, as well as upward over the abdominal wall. Scarpa's fascia extends from the lower abdominal wall to the penis as Buck's fascia, to the scrotum as dartos, and to the perineum as colle's fascia.

The Scarpa's fascia is attached to the deep fascia of the thigh (fascia lata), just below the inguinal ligament at the groin crease (**Last, 1999**).