DIFFERENT METHOD OF REPAIR OF INGUINAL HERNIA

E S S A Y

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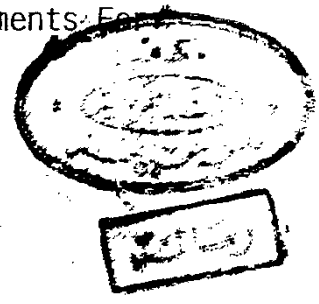

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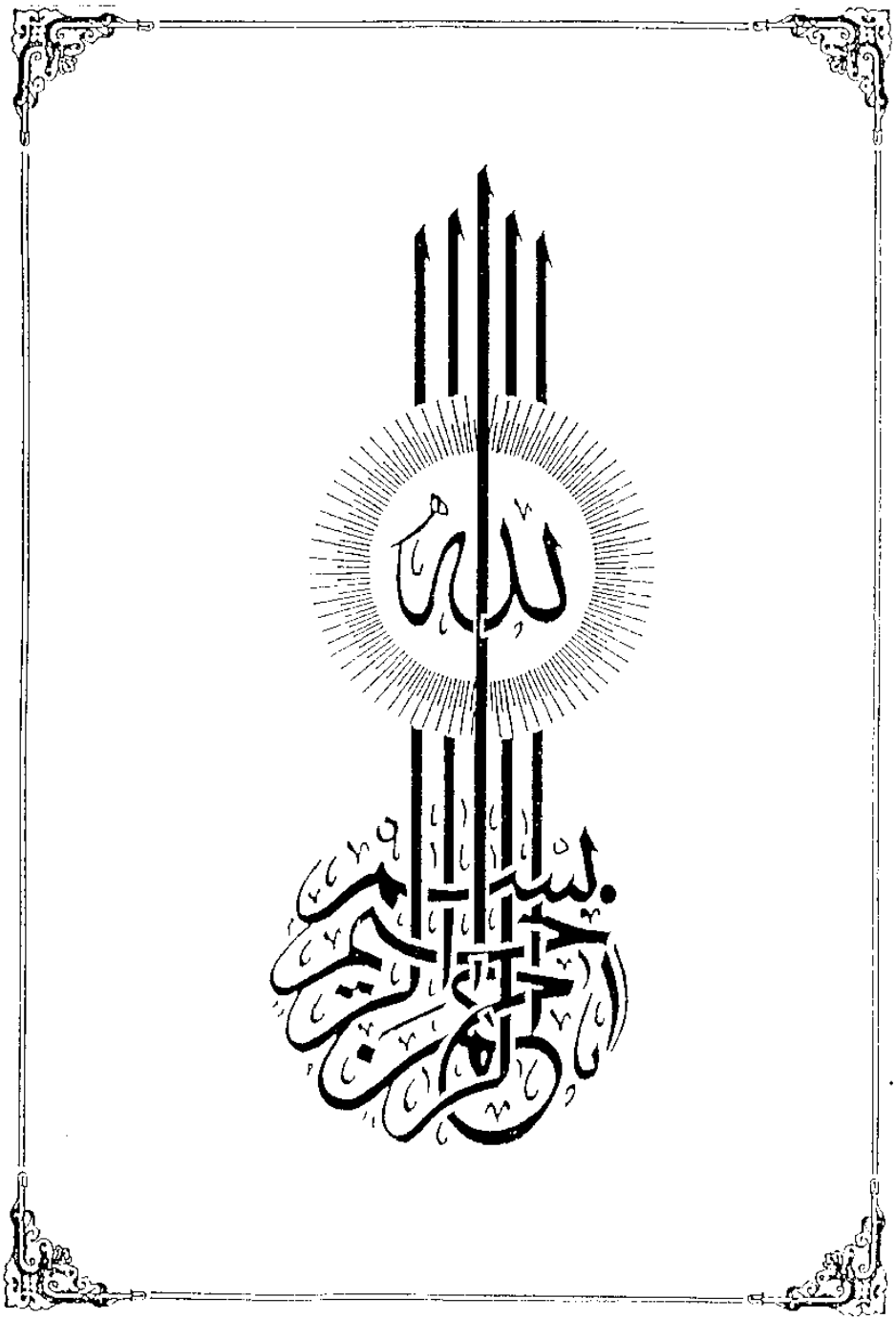

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INTRODUCTION

Inguinal hernia represent a very common surgical problem and it is by fare the commonest of all external abdominal herniae .

Herniae are responsible for considerable economic loss to Patient, the family, and the nation. It is therefore important to perform the type of the operation which will often the best chance, for perminant cure with minimal risk. Opinions still differ as regards the aetiology of inguinal herniae. Many authers believes that all indirect inguinal herniae are due to congenital preformed sac, while others believe that local or general factors which weaken the inguinal canal are more important in the aetiology. (Abdel Moti, et al., 1980).

Whatever the cause, hernia represents a disparity between the intra-abdominal pressure and the strength of the retaining abdominal wall, this results in escape of the abdominal contents through the weak portion of the wall.

Different operations have been suggested for inguinal hernia repair. All methods of repair are below ideal as indicated by the relatively high incidence of recurrence, which may be attributed to unsound repair or improper understanding of the anatomical bases (El-Chareeb, et al., 1980).

The key principle in the modern surgical treatment of the inguinal hernia is to operate on hernias electively before incarceration and strangulation occur, since only in this way can needless deaths be avoided (Dietch and Sourcant, Feb. 1981).

Hernia associated with intestinal obstruction is described to be one of the 10 leading causes of death in the united states (Nyhus and Bombeck, 1981).

The present work deals with the different methods used in surgical managment of inguinal herniae in trial to reach a conclusion about the most ideal method.

A N A T O M Y

SURGICAL ANATOMY OF THE INGUINAL REGION

The groin is that portion of the anterior abdominal wall below the level of anterior superior iliac spine.

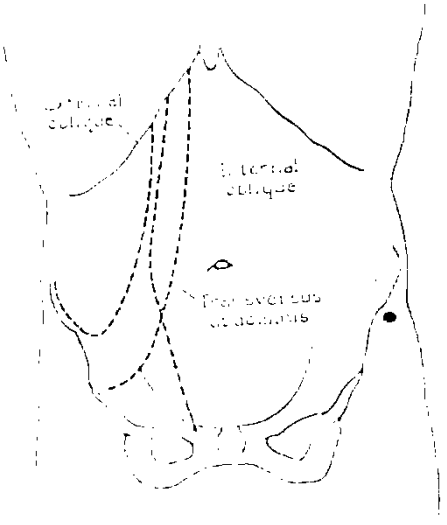
The abdominal wall is composed in the groin as elsewhere of three layers of muscles and aponeurosis (Condon, 1971).

They are external oblique, internal oblique, transversus abdominis and their aponeurosis. These three musculoaponeurotic laminae of the inguinal region are covered on each of their two plate surfaces by fascial sheets. The innermost of these six fascial plates is called the transversalis fascia and outer plate is called the innominate fascia. The four remaining fascial laminae have never been named (McVay, C.B., 1974).

The three laminae are protected externaly by skin, subcuteneous tissue and the fascia of scarpa which is formed by the condensation of fibrous septa of the subcuteneous tissue beneath the fat into thin but strong membrane (Last, 1984).

The three laminae are covered internally by pariatal peritonium which is attached to the transversalis fascia on the lower anterior abdominal wall by extraperitoneal areolar tissue. The areolar tissue over this expansile

part is loss and cellular (fascia transversalis on the lower anterior abdominal wall) while over non expansile parts it is often very thick (e.g. fascia iliaca) (Last, 1984).



INDIVIDUAL ANATOMICAL STRUCTURES IN THE GROIN

SKIN AND SUBCUTANEOUS TISSUE:

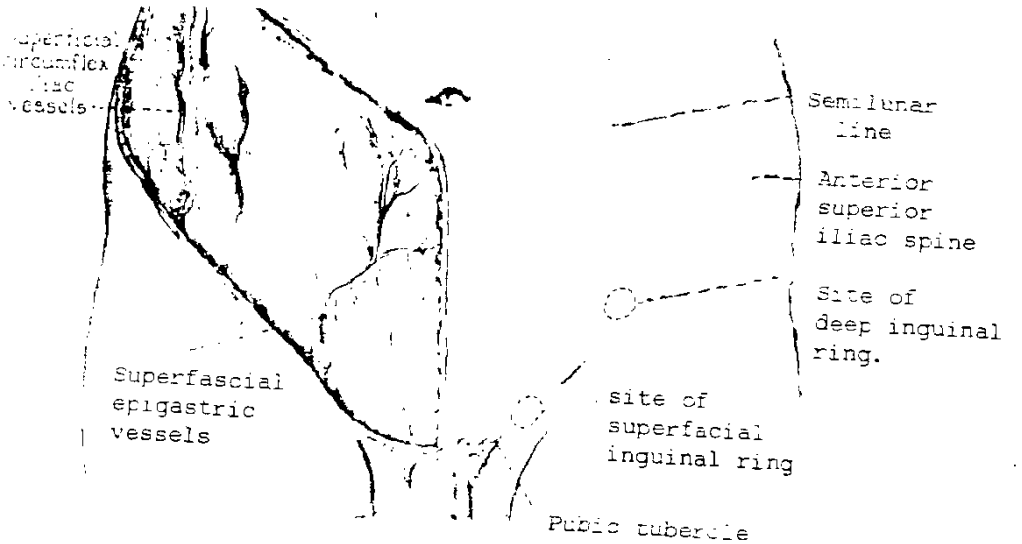
Several landmarks are either palpable or easily visible in the groin. The anterior superior iliac spine is found subcutaneously at the lateral aspect of the groin, the body of the pubic bone can be palpated in the midline, and its upper margin can be felt easily even in the obese subjects.

Also the pubic tubercle is usually palpable at the lateral margin of the body of the pubis. It is located just above the origin of the adductor longus muscle, which can be brought into prominence by adduction of the hip.

At the lateral margin of each rectus abdominis muscle there is a depression, the sumilunar line, particularly marked in the muscular subjects, which curves obliquely upward from the lateral aspect of the body of the pubis to a point at about the level of the anterior superior iliac spine, after which it turn more vertically (Condon, 1978).

Subcutaneous Fat:

The thickness of this layer varies with the obesity of the subject. It is continuous with the subcutaneous fat of the adjacent abdominal wall and with corresponding layers of the thigh and perineum. (Condon, 1978).



(Nynus and Condon, 1978).

The superfiscial epigastric vein is frequently visible in the midportion of the groin, pursuing a more or less vertical course upwards in the subcutaneous tissue. It is accampanied by the superficial epigastric artery. Branches of the superficial circumflex iliac vessels are present laterally near the iliac crest. At the neck of the scrotum just inferior to the pubic tubercle the superfascial external pudendal vessels are found crossing from their origin to be distrebuted to the penis and scrotum (Condon, 1978).

Scarpa's Fascia (Superficial Fascia):

It is dense, homogeneous, and membraneous sheet of areolar tissue that forms a definite lamina in the depth of the subcutaneous tissue and is usually prominent only in the region of the groin (Condon, 1978).

Scarpa's fascia becomes thinner superiorly and then looses its identity in the subcutaneous tissue of the flank and abdomen above the level of the umbalicus. Medially it is attached to the linea alba in the midline and descend into the dorsum of the penis forming the fundiform ligament, the suspensory ligament and the superficial fascia of the penis and continues over the scrotum as the dartos tunic. Scarpa's fascia is attached laterally to the crest of the ilium. Inferiorly it passes over the inguinal ligament into the thigh (Condon, 1978).

In the region at the external inguinal ring, scarpa's fascia has a firm attachment to the pubic tubercle lateral to the spermatic cord and just above the origin of adductor longus muscle, the fusion to bone is continued posteriorly along the ischiopubic ramus and into the peritoneum, where this layer is called coll's fascia. Between the pubic tubercle and the symphsis pubis scarpa's fascia has no inferior attachment, the opening thus created, the abdominoscrotal passage serve to transmit the spermatic cord. (Condon, 1978). Deep to the scarp's fascia a further collection of subcutaneous fat may be found, this layer is always much thinner and the cobules are much smaller than those of the more superfascial. (Condon, 1978).

Innominate Fascia of Gallandet:

It is the investing sheet of fascia that cover the external oblique muscle with its aponeurosis. It is a heavy plate of fascia which is carried down on the aponeurosis of the muscle as a definite entity and can be separated as a sheet from the aponeurotic fibers (McVay, 1974).

On the deep surface of the external oblique muscle is a comforable, but thinner layer of fascia that is carried down on the aponeurosis as an extremely thin,

delicate layer (McVay, 1974).

The two fascial laminae of the external oblique aponeurosis are continuous around the free border of the inguinal ligament and at the subcutaneous inguinal ring they fuse to be carried down on the spermatic cord as the external spermatic fascia (McVay, 1974).

External Oblique aponeurosis:

The external oblique arise from the lower eight ribs posteriorly and sweep downward and around the trunk as a broad, flat muscle, the muscle fibers give way to their flat tendon of insertion, the external oblique aponeurosis, at the linea semilunaris located in approximately the midclavicular line, the aponeurosis is attached to the iliac crest and the anteior superior iliac spine laterally and inserts rather broadly into the linea alba medially. It makes up a portions of rectus sheeth only very medialy and does not attach to the lateral edge of the sheath. Inferiorly the aponeuros is slightly thickened and folded back upon itself to form the inguinal ligament. This structure is not a true ligament since its function is not to stabilize the bone. The lower edge at the inguinal ligament is loosly bounded to the fascia lata by the innominate fascia. Medialy the inguinal ligament is inserted in the pubic tubercle and fans downward into the superior pubic ramus