COMPARATIVE STUDY OF THE CURRENT TECHNIQUES IN INGUINAL HERNIA REPAIR

Thesis

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ARABIC SUMMARY.

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INTRODUCTION

Groin herniorrhaphy is among the oldest and most common operation in a surgeon's technical armamentarium. In 1993, this proceudre continues to be the most frequent operation performed by general surgens in the United States, with 700,000 procedures completed annually **(Rutkow, 1993).** In UK, approximately 80,000 hernia repairs are performed per year, it is the most common operation in males **(Kingsnorth, 1995).**

Unfortunately, it is widly acknowledged that primary inguinal hernia repair will result in a 10-15% recurrence rate with an even higher precentage following the repair of a recurrent inguinal hernia **(Shulman et al., 1990).**

From the patients' prespectives, the hernia is a painful and uncomfortable disability which may prevent his working, however, the surgeons perceive the repair of a hernia as a triviality, often beneath their attention **(Devlin, 1982).**

In 1880-1890 periods in the last century could justifiably be termed "the decade of the inguinal hernia". Significant contributors include Lucas Champanniere (incision and opening of external oblique fascia, ligation of hernial sac) Banks (high ligation of peritoneal sac), Marcy (closure of the transversalis fascia/iliopubic tract), and Bassini (complete division of the fascial floor of the inguinal canal from the internal ring to the pubis and closure with a layer of non-absorbable sutures) **(Kingsnorth, 1995).**

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In 1953, Shouldice wrote his earliest article in his technique of repair. In this repair the transversalis fascia is first divided and then imbricated to Poupart's ligament, finally, the conjoind tendon and internal oblique muscle also approximated in layers to the inguinal ligament. Since then, interpretation of the repair by members of staff, the first in 1973 by Glassow and the most recent in 1992 by Bendavid **(Deveny, 1994).**

In 1986, Lichtenstein has popularized the concept of avoiding closure of hernia defect under tension with sutures. He accomplishes this by suturing polypropylene mesh to Poupart's ligament and the internal oblique muscle or apponeurosis for direct as well as indirect hernias **(Bashnak, 1995).**

Recently, in 1990, Ger and associates introduce laparoscopic hernia repair. Currently, three techniques are being evalauted: the intraperitoneal onlay mesh, the transabdominal preperitoneal repair, and the extraperitoneal hernioplasty **(Filipe et al., 1992).**

In all cases perform a herniorrhaphy to reinforce the posterior wall of the inguinal canal. The guidelines of the Royal College of Surgeons of England recommended either Souldice repair or the Lichtenstein repair **(Poston, 1996).**

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AIM OF THE WORK

The aim of this work is to compare between different techniques currently used for inguinal hernia repair namely: Shouldice repair, Lichtenstein repair.

Sixty patients suffer from non-recurrent inguinal hernia are divided into two groups in a randomized manner. Group A is subjected to Shouldice technique and group B is subjected to Lichtenstein hernioplasty. The study is aimed to compare between these two techniques as regards operative technique, early postoperative complications, and early postoperative results.

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REVIEW OF LITERATURE

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SURGICAL ANATOMY OF THE INGUINAL CANAL

No disease of the human body, belonging to the province of the surgeon, requires in its treatment a better combination of accurate anatomical knowledge with surgical skill than Hernia in all its varieties.

Sir Astley Paston Cooper, 1804

The high cure rate today, however, own more to the exploitation of the surgical anatomy of the groin than upon any one medical or therapeutic advance.

J.H. Talbot, 1961
(Condon, 1995)

The groin has been succinctly defined by **Condon (1964)** as that portion of the anterior abdominal wall below the level of the anterior superior iliac spines. It this area, a viscus may protrude, forming a visible and usually palpable swelling. Three types of hernia - direct inguinal, indirect inguinal, and external supravesical - may emerge through the abdominal wall by way of the external inquinal ring above the inquinal ligament; a fourth type, femoral hernia, emerge beneath the inguinal ligament by way of the femoral canal. These four hernias make up 90 percent of all hernias **(Skandalakis et al., 1990).**

Within the groin area are the inguinal and femoral canals. The inquinal canal is an oblique cleft about 4cm long in the adult, lying about 4 or 5cm above the inguinal ligament. The femoral canal below the inguinal ligament is 1.25 to 2cm

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long and occupies the most medial compartment of the femoral sheath **(Skandalakis et al., 1990).**

The anatomy of the inguinal region is misunderstood by some surgeons. An important sources of this misunderstanding is the relative strength of connective tissue structures of the groin on introduction of embalming as it brings about coagulation of protein within connective tissue, resulting is a change both in appearance and in apparent strength. A layer of connective tissue, such as transversalis fascia, which in life is thin, transparent, and of little intrinsic strength, is transformed by embalming into an obaque sheet that appears capable of holding sutures **(Condon, 1995).**

Then there is the problem of nomenclature, the term *fascia* and *aponeurosis* frequently are used loosely in an interchangeable manner. An *aponeurosis*, in the context of structures of the groin, is the flat, dense, white tendon of insestion of one of the three flat muscles of the lateral abdominis. These aponeurosis all come together in the midportion of the lower muscular abdominal wall to form the anterior sheath of the rectus abdominis muscle. An aponeusosis, being a tendon, is composed of strong collagenous tissue. A *fascia*, on the other hand, is a condensation of connective tissue into a definable, homogenous layer, which may vary from a diaphanous layer of no intrinsic strength to a more easily discerned and thicker lamina. Such a tissue invest or cover the musculas or aponeurotic layers of the groin, but they lack the organization and intrinsic tensile strength of an aponeurosis. The designation *ligament* is applied to a wide variety of structures whose strength may vary from dense aponeurosis (e.g. inquinal liqament) to delicate

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