



*Republic of Iraq  
Ministry of Higher Education  
And Scientific Research  
University of Diyala*



**All in one procedure Versus classical  
procedure For Hernioplasty In Patients With  
Inguinal Hernia**

**A Thesis  
Submitted To The College Of Medicine And Committee of Graduate  
Studies of University Of Diyala As Partial Fulfillment Of The  
Requirements For The Degree Of Master In General Surgery**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

إِنَّا فَتَحْنَا لَكَ

صدق الله العظيم

سورة الفتح

(1) آية

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I certify that this thesis entitled “All in one procedure Versus classical procedure For Hernioplasty In Patients With Inguinal Hernia ” was prepared under my supervision at the college of medicine, University of Diyala, in partial fulfillment of the requirements for the degree of Master Science in general surgery.

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This is to certify that this thesis entitled “All in one procedure Versus classical procedure For Hernioplasty In Patients With Inguinal Hernia ” by “**Raghad Fais Thabet**” was reviewed linguistically. Its language was amended to meet the style of English language.

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## Dedication

This thesis work is dedicated to:

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My dear father who always encourages me and gives me the hope,

My dear mother who gives me the kindness, lightings my way and  
the mystery of success,

My lovely dear husband (Dr. Hussam) who never lets me alone,  
always motivates me, helps me and gives whatever I need,

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My grandmother god bless her,

My little boy (my hopes) Mohammed,

To all who helped me in my study.

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## Summery

In this study we propose a new open mesh hernia repair procedure for the treatment of inguinal hernias in adults by using a new shape of mesh ,smaller in size and also different technique from the usual clasical procedure in inguinal hernia repair which aim to improve patients' comfort and to reduce the incidence of chronic neuralgia.

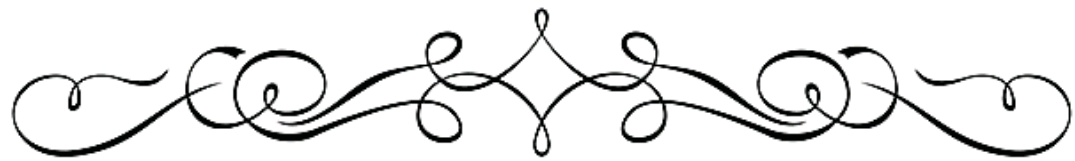
**This** hernio plasty technique respects the inguinal canal anatomy with the use of smaller mesh, and appears to escape neuralgia with maximum comfort for the patients.

A comparative study was designed to study the outcome of different mesh used in the hernia operations at Baaquba teaching hospital total number of 130 patient were recorded in the period extended from 1st of May 2019 to end of March 2020. The primary unilateral inguinal hernia patients were enrolled and they underwent the “all-in-one” mesh hernioplasty technique. An enrolled patients were distributed into two groups . hernia patients operated with all in one technique which named group A ( n=65) and group B contain patients operated with classical technique ,(n=65)

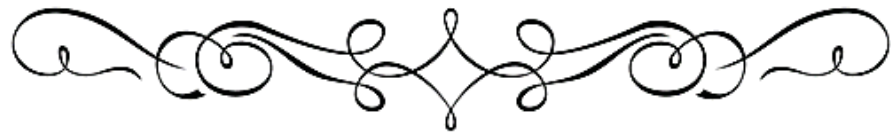
Group A contain 65 male patients. Group B contain 65 male patients. So, in both the group comparable number of patients were enrolled for the unbiased comparison. In the group A about 40(63.79%) and 25 (26.21%) patients showed right inguinal hernia (RIH) and left inguinal hernia (LIH), respectively. In the group B about 38 (58.46%) and 27 (41.54%) patients showed right and left inguinal hernia, respectively.. After the operation, the pain was monitored for 1 week. Mild pain was reported by the 50 (76.92%) and 49 (75.39%) patients from A and B groups, respectively. Moderate pain was reported by the 5 (7.69%) and 15 (23.08%) patients from the A and B groups, respectively. About 10 (15.39%) and 1 (1.54%) patients reported no

post operative pain from A and B groups, respectively. 5 (7.69%) from group A individuals were needed analgesics. 25 (38.46%) from group B individuals were needed analgesics. Post operative parameters such as urinary retention, bruising genitalia, seroma and wound infection were recorded. 1 (1.54%) and 10 (15.39%) patients showed urinary retention in the A and B groups, respectively. 3 (4.62%) and 11 (16.92%) patients showed bruising genitalia in the A and B groups, respectively. 1 (1.54%) and 13 (20.00%) patients showed seroma after surgery in the A and B group, respectively. Wound infection was reported by only 4 (6.15%) individuals from group B. In the small size mesh used patient group, 3 (4.62%) individuals reported to have slight pain in the 1<sup>st</sup> week. The number of pain reporting individuals gets decreased until the 3<sup>rd</sup> month. At the end of the study, all the patients showed pain free activity. Group B also showed a similar trend as group A. In the 1 week, around 20 (30.78%) individuals reported to have slight pain. After 1 month, the individuals reported pain were decreased to 10 (15.39%). Group A patients showed maximum recovery rate (100%) than group B (96.92%).

The study can be concluded as in the each group A patients showed less post operative pain, less need for analgesia, less urinary retention, bruising genitalia and seroma. Group A patients showed a maximum recovery rate (100%) than group B (96.92%).



# CHAPTER ONE



## Introduction

## 1.1 Introduction

The word “hernia” coined from the Greek word “hernios” meaning bulges. Around 1550BC, hernia was firstly defined as a disorder in the Mesopotamia and Egypt cultures (**Sachs et al., 1997; Cosmacini, 2003**). It is an unusual bulging of intra abdominal viscera through a weak area of abdominal wall . Initially it didn't shows any symptoms, while a swelling or lump can be seen on the abdomen or groin region. Groin region is associated to the abdominal cavity through which the preperitoneal fat bulge out and it is either congenital or acquired. In some cases, the foetal subsiding of the testicles through the inguinal canal at the abdominal position is known as congenital hernia (**Komorowski et al., 2009**). The acquired hernia develop at the later stages of life and it is associated with impaired collagen formation (**Tatay, 2001**).

Inguinal hernia repair is one of the most frequently performed surgical procedure. An inguinal hernia does not resolve spontaneously and must be repaired because of high risk of complications (**Sadik et al., 2015**). Generally, mesh repair (Lichtenstein tension free hernioplasty) and Moloney darn repair were practiced for inguinal hernia repair. Both showed low recurrence rates. Among two, mesh repair was considered to be more recent (**Al-Saiegh et al., 2009**). There is minimal data regarding the feasibility of Proline (patch and plug) inguinal hernia repair under local anaesthesia and patient acceptability (**Al-Dhahiry, 2014**). Although inguinal hernia repair is one of the most frequently performed surgical procedure worldwide, the ideal repair still not accepted yet (**Khazaal, 2017**). Development of new prosthetic materials and its used in the hernia repair surgery has been improved the outcome in many fold (**Assim, 2012**). In the recent years, Inguinal hernia (IH) repair were changes from pure tissue repair to the prosthetic laparoscopic repair. Use of fascia and sutures under tension for IH

repair showed high recurrence of hernia. Both of these techniques promoted towards the development of polypropylene mesh to strengthen the posterior wall of the inguinal canal **(Salim et al., 2008)**.

A common problem after inguinal hernia repair is postoperative pain. It may hamper return to the normal activity and postpone hospital discharge. Opiates and non-steroidal anti-inflammatory drugs (NSAIDs) alone or combinations can be given for postoperative analgesia **(Salman et al., 2017)**.

Many studies were available regarding the short and long term outcome after ventral hernia repairs **(Heniford et al. 2003; Lomanto et al., 2006; Bingener et al., 2007; Pring et al., 2008; Itani et)**.

Inguinal hernia repair is the most common operation in surgery. Open musculo-aponeurotic repair using sutures under tension has been used for several years to close the defect. Now days, tension-free repair using a prosthetic mesh is becoming progressively common and considered the gold standard. Many surgery procedures have been used, however the most effective surgical technique is still unknown.

With this background, we aim to evaluate the operational outcome of hernio plasty technique using all in one and traditional technique.



## **1.2 Aim of study**

This new hernio plasty technique respects the anatomy of the inguinal region, uses a smaller size mesh, and less tissue handling .Seems to avoid neuralgia by preservation of the nerve supply with maximum comfort for the patients and less post operative complications