LAPAROSCOPIC FINDINGS IN INFERTILITY

Thesis

SUBMITTED IN PARTIAL FULFILMENT

FOR THE DEGREE OF MASTERSHIP **(M.Sc.)**

IN

(OBSTETRICS & GYNAECOLOGY)

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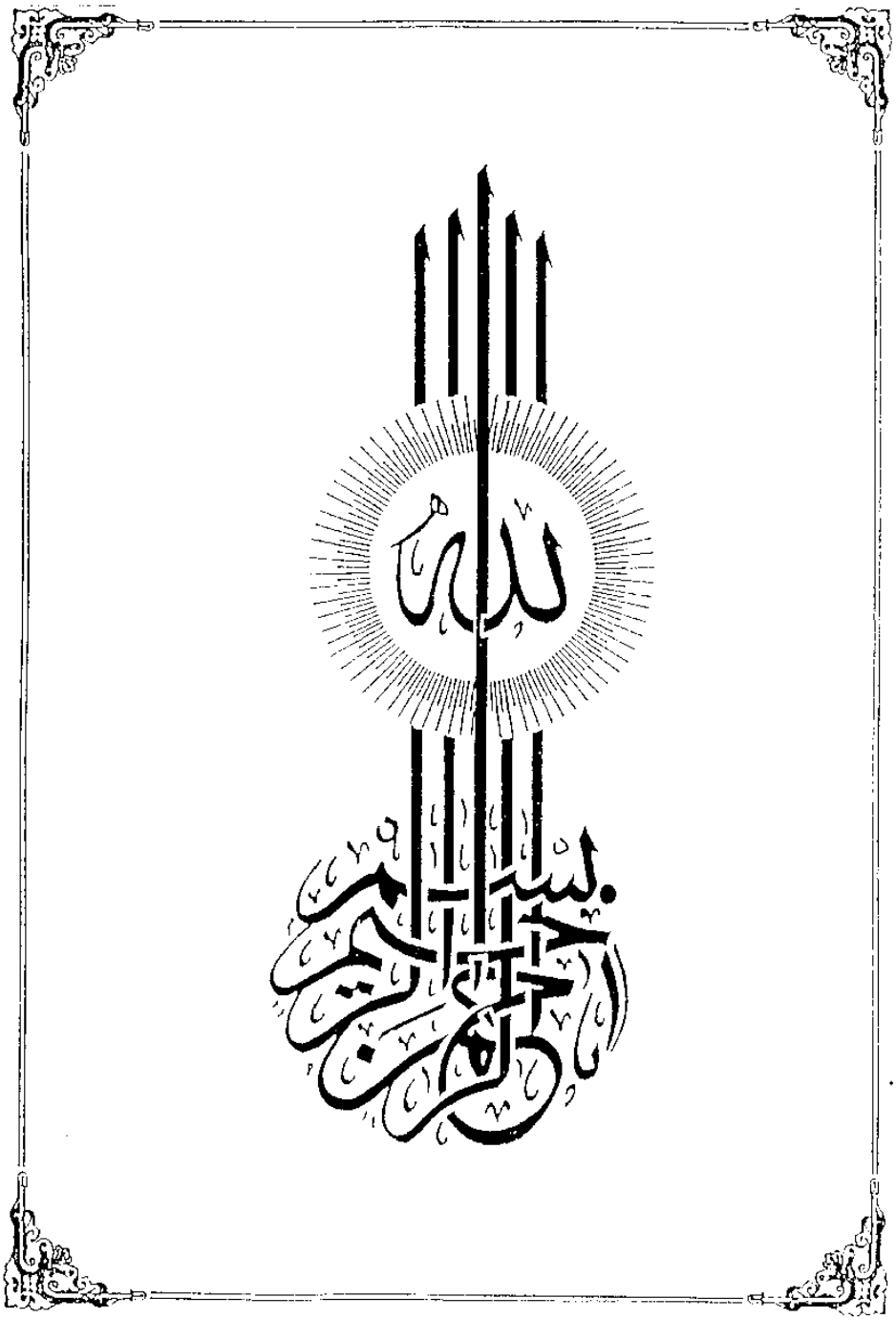
1985

ACKNOWLEDGEMENT

I wish to express my sincere gratitude to Professor Dr. **El Sayed El Mahgoub** for his constant supervision and advice in the preparation and arrangement of this work.

I am indebted to him for his continuous encouragement to complete this work.

I would like to express my sincere thanks to Dr. **Ali Farid** for his honest assistance, I am indebted to him for his suggestions and follow up of the work.



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INTRODUCTION AND AIM OF THE WORK

INTRODUCTION

Infertility affects approximately 10% of couples, which makes it one of the more commonest problems for which people seek medical aid.

Special investigative techniques for evaluting the tubes, uterus and pelvis have become increasingly popular among gynecologists.

The revival of interest in endoscopy has been simultaneously due to the rapid advancement of optical technology and the broadening indication for its use.

Laparoscopy is an important tool for investigation of infertile patients. Now no female work-up is considered complete without endoscopy.

From 1901, when the use of closed cavity endoscopy was demonstrated for the first ;time by kelling, to 1970 when laparoscopy was a well accepted and frequently used procedure, a great advancement had occured in this diagnostic method.

The laparoscope is indicated to diagnose unknown problems, to evaluate known problems and could be used as a surgical tool.

Using the laparoscope, unnecessary laparotomies can be avoided in many cases, thus shortening hospitalization and minimizing surgical risks.

Prior to laparoscopy, certain more elementary pre-requisits for infertility evaluation should be satisfied. These include the following:

(1) Semen analysis.

(2) Ovulation evaluation.

(3) Uterine and tubal assessment.

(4) Post coital testing.

It is generally accepted that laparoscopy should be performed if a woman's basic infertility evaluation reveals no abnormalities. A significant number of these patients have unsuspected pelvic pathology that can be detected by laparoscopy.

AIM OF THE WORK

The aim of the work is to report on the laparoscopic findings in both primary and secondary infertile patients and to determine the place of laparoscopy in the process of infertility evaluation.

REVIEW OF THE LITERATURE

HISTORY OF LAPARASCOPY

The people and events of history cast long shadows that fall on the things that we enjoy today and call our own. It will be hard to point to any major development or individual without acknowledging a debt to some of the early pioneering developments and ingenuity.

Gynecologic laparascopy is a spin-off of abdominal endoscopy which in itself is a spin-off of cystoscopy.

Bozzani (1805)[41] was the first to attempt to visualize the interior of a body cavity. He visualized the human urethra in a living subject for the first time using candlelight and cumbersome tube as an endoscope.

Segalas (1826)[41] refined the technique of urethroscopy by adding a cannula to the endoscopic tube as an obturator to facilitate introduction and a system of mirrors to reflect light into the cavity.

Desormeaux (1853)[41] developed the first serviceable urethroscope and cystoscope using mirrors to reflect light of kerosene lamp.

Nitze (1877)[41] added a lens system to the endoscopic tube which magnified the area being examined, and this lens system is the forerunner of the optical system of modern cystoscopes and all other endoscopes.

Edison (1880)[41] invented the incandescent lamp Newman (1883) described an instrument using the incandescent lamp as a light source.

Boisseau de Rocher (1889)[41] separated the ocular part of the cystoscope from the sheath thus allowing the use of multiple telescops which provided greater latitude of observation and made manipulation through the sheath possible.

At the close of the 19th century cystoscopy and other open cavity endoscopic procedures were well established and in daily clinical use.

Ott (1901)[41] introduced endoscopic inspection of the abdominal cavity, he inspected the abdominal cavity with the help of a headmirror and a speculum which was introduced through a small abdominal wall incision, he also used the same technique to visualize the pelvis by

making a vaginal cul-de-sac incision with the patient in Trendelenburg position.

Kelling (1901)[41] demonstrated the use of closed cavity endoscopy for the first time, he first inserted a needle into the peritoneal cavity of living dogs and distended it with air, he then inserted Nitze cystoscope at another site for viewing. **Jacobaeus (1910)**[41] was the first to report the use of pneumoperitoneum and inspection of the abdominal cavity with a cystoscope in human beings, he did not use any other special pneumoperitoneum needle as kelling had, but introduced the air through a cystoscope trocar shealth and then introduced a cystoscope.

Bernheim (1911)[41] inserted a proctoscope through a small abdominal wall incision for direct viewing of the contents.

Between 1901 and 1911 four investigators from different parts of the world reported their attempts to visualize the abdominal organs by methods not requiring major surgery.

Ott and Bernheim utilized a small incision through which a speculum or proctoscope was inserted, this method

is closed cavity endoscopy utilizing an open technique.

Kelling introduced filtered air through a needle into the abdominal cavity and then at a separate site introduced a cystoscope.

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Jacobaeus (1910) used a trocar tube with a trap-door to introduce filtered air and then inserted a cystoscope through the same trocar, this method is closed cavity endoscopy utilizing a closed technique.

Kelling's original report described his work on dogs, in **1910** he published a reply to Jacobaeus stating that he had used his method on humans and in **1923** addressed the German Surgical Society concerning his experience on humans. Both Kelling and Jacobaeus utilized a Nitze cystoscope, with the advantages of its lens system. Ott and Bernheim used a speculum or proctoscope without a lens system and introduced it through an incision.

Kelling and Jacobaeus are the "fathers" of what we know today a laparoscopy.

It would also be fair to say that **Ott and Bernheim** are the "fathers" of what we know today as the minilaparotomy.

Nordentoft (1912)[41] using a method indentical to that of Kelling and Jacobaeus, described vewing the femal pelvis in a cadaver which had been placed in deep Trendelenburg position.

Orndoff (1920)[41] developed a sharp, pyramidal point on the trocar to facilitate puncture of the abdominal cavity a pneumoperitoneum had been created, he also developed an automatic trocar sheath valve to prevent the escape of gas.

Unverricht (1922)[41] built a larger endoscope with a wider angle of vision and a stronger light to improve the visual image.

Zollikofer (1924)[41] was the first to use carbon dioxide as the gas of choice for insufflation because it was easily and quickly absorbed, a fore-oblique (135 degrees) lens viewing system was developed and introduced by Kalk (1929)[41] he published 29 papers between 1929-1959.

Fervers (1933)[41] developed techniques and instruments to cauterize abdominal adhesions and biopsy abdominal tissues.

Ruddock (1934)[41] developed his own single puncture operating peritoneoscope and biopsy instruments Hope (1937)[41] suggested the use of abdominal endoscopy in the differential diagnosis of ectopic pregnancy and reported ten cases, this was the first report in the literature to date to be directed exclusively to the diagnosis of gynecologic diseases. Anderson (1937)[41] reported his experiences with peritoneoscopy and suggested that his work would be of special interest to gynecologists, by using his special electrode and endothermic coagulation, sterilization of the female can be performed. Veress (1938)[41] introduced a new type of pneumoperitoneum needle with a spring-loaded blunt probe surrounded by a sharp outer sleeve, this needle offered additional safety in preventing intr-abdominal soft tissue perforations.

Orndoff (1920)[41] mentioned abdominal endoscopy as being of value in diagnosing ovarian cysts and ectopic gestation.

Beling (1941)[41] reviewed and listed the indications for peritoneoscopy, included in his nine indications are: suspected pelvic neoplasms , endometriosis, old chronic inflammatory disease of any pelvic organ, suspected ectopic pregnancy.