



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



# شبكة المعلومات الجامعية

## التوثيق الالكتروني والميكرو فيلم

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأفلام قد اعدت دون أية تغيرات



## يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of  
15 – 25c and relative humidity 20-40 %



شبكة المعلومات الجامعية



# بعض الوثائق الأصلية تالفة



شبكة المعلومات الجامعية



بالرسالة صفحات  
لم ترد بالأصل

**RANDOMISED COMPERATIVE STUDY  
BETWEEN OPEN CHOLECYSTECTOMY  
AND LAPAROSCOPIC CHOLECYSTECTOMY**

**Thesis  
Sumbitted to the Faculty of Medicine  
University of Alexandria  
In Partial Fulfilment of the Requirement  
of the degree of Doctor of General Surgery**

**By**

*Maher Mahmoud El-Feiny*

MBBCH Alex., MS Alex.

Faculty of Medicine  
University of Alexandria

1996

B  
1-0 CF

# **SUPERVISORS**

**Prof. Dr. Zaki Ahmed Azzam**

*Professor and Head of Surgical Unit (F),  
Faculty of Medicine,  
University of Alexandria.*

**Prof. Dr. Ali Abdel-Moeti Soliman**

*Professor of Internal Medicine,  
Head of Hepatobiliary Unit,  
Faculty of Medicine,  
University of Alexandria.*

**Prof. Dr. Farouk Abbas Mekky**

*Professor of Surgery,  
Faculty of Medicine,  
University of Alexandria.*

# **ASSISTANT SUPERVISORS**

**Dr. M.A. Gamal**

*Assistant Professor of Surgery,  
Faculty of Medicine,  
University of Alexandria.*

**Dr. M. Yousry Taher**

*Lecturer of Internal Medicine  
Faculty of Medicine,  
University of Alexandria.*

*To my great and devoted father,  
my loving mother,  
my caring wife,  
Mostafa and Amr.*



## ACKNOWLEDGEMENT

Thanks to Allah who enabled me to accomplish this work.

I wish to express my deepest thanks and sense of gratitude to *Professor Zaki A. Azzam, Professor of Surgery and Head of Surgical Unit (F)*, for his fatherly supervision, guidance, endless support, kind criticism and valuable advice. Unless he encouraged me persistently, the present work would have not been carried out.

I am particularly grateful to *Professor Ali Abdel-Moeti Soliman*, Professor of Internal Medicine, Head of Hepatobiliary Unit, whose kindness and guidance, his vital observations and close supervision and advises have done a great deal towards completion of this work.

My deepest and endless thanks and gratitude are due to *Professor Farouk A. Mekky*, Professor of Surgery, for his efforts in teaching me the laparoscopic technique. His great help in processing and generous expert through-out this work. His kind precious help, close supervision and unlimited help can not be appreciated.

My deepest thanks are due to *Dr. Mohamed A. Gamal*, Assistant Professor of Surgery, for all the guidance and effort in teaching me the laparoscopic skills. He shared in this work since the very beginning and participated by his wise ideas even in the choice of the subject.

It is my pleasure to express my indepthness and deepest gratitude to *Dr. M.*

*Yousry Taher*, Lecturer of Internal Medicine, who have given me a great deal of his scientific effort and his precious time. His instructions have been very precious and directive to me.

A special word of gratitude I would like to express to *Prof. Essam El-Sahwy*, Professor of Surgery, and Head of Paediatric Surgery, for his much help and effort towards completion of this work.

Finally, I am deeply indebted to *Professor Sayed Ibrahim, Assistant Professor Sherif Zaky, Assistant Professor Yousry El-Kharadly, Lecturer Mohamed El-Riwini and Lecturer Walaa Shehab* to their participation in the practical part. And all other members in surgical Unit "F", *Professor Said Obeid, Professor Ibrahim Abdel Razik, Professor Nabil Abdel-Baki, and Lecturer Hussam Hassab* and all colleagues for their valuable advice, kind help, guidance and cooperation.

# CONTENTS

CHAPTER I . . . . .	PAGE
Introduction	
■ <i>Evolution of endoscopic surgery . . . . .</i>	<i>1</i>
■ <i>Patient selection . . . . .</i>	<i>14</i>
■ <i>Patient position . . . . .</i>	<i>20</i>
■ <i>Pneumoperitoneum . . . . .</i>	<i>24</i>
■ <i>Insertion of sheath and trocars . . . . .</i>	<i>36</i>
■ <i>Operative technique. . . . .</i>	<i>44</i>
■ <i>Cholangiogram . . . . .</i>	<i>55</i>
■ <i>Postoperative care. . . . .</i>	<i>73</i>
■ <i>Anatomic variations of the cystic artery . . . . .</i>	<i>75</i>
■ <i>Biliary ductal anatomy and anomalies . . . . .</i>	<i>80</i>
CHAPTER II - Aim of the Work . . . . .	83
CHAPTER III - Materials . . . . .	84
CHAPTER IV - Methods . . . . .	86
CHAPTER V - Results . . . . .	114
CHAPTER VI - Discussion . . . . .	188
CHAPTER VII - Summary . . . . .	300
CHAPTER VIII - Conclusion . . . . .	311
CHAPTER IX - References . . . . .	314
Protocol	
Arabic Summary	

# ***CHAPTER 1***

## ***Introduction***

## EVOLUTION OF ENDOSCOPIC SURGERY

The evolution of operative endoscopy would be incomplete without due credit to the development of endoscopes, which make it all possible. Man's innate curiosity to view the inside of body cavities or canals dates back to the time of Hippocrates II (460-375 B.C.)<sup>(1)</sup> who mentioned examination of the rectum by looking with a rectal speculum to see where the rectum was affected. The Babylonian Talmud refers to an instrument described in the thesis Niddab (65 B.C.) that was intended to distinguish between vaginal and uterine bleeding. This probably represented the oldest form of vaginal speculum and therefore the earliest incidence of endoscopy in gynecologic annals. Archigenes of Apamea in Syria (95-117 A.D.) and Soranus of Ephesus (98-108 A.D.) both mentioned in their writings vaginal speculums. Abulkasim (1012-1013 A.D.) an Arab, used a glass mirror to reflect light into the vaginal cavity.<sup>(1)</sup> He was thus the first to use reflected light for the purposes of illumination and observation of the interior of a body orifice. The first endoscopic light should be credited to Tulio Caesar Aranzi who in 1585 wrote about using solar rays entering through a hole in a window shutter and brought to a focus through a spherical glass flask filled with water and projected into the nasal cavity.<sup>(1)</sup>

Bozzani (1805 A.D.) of Frankfurt was the first to visualize the interior of the urethra, which he visualized in a human by using candle light and a cumbersome tube as an endoscope. Segalas (1826) of France 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. At about the same time Fisher of Boston described an instrument to inspect the vagina and extended its use to view the urethra. Desormeaux (1835) is credited with being the father of cystoscopy when he developed the first serviceable urethroscope and cystoscope by using mirrors to reflect light of a kerosene lamp. In July 1869, Commander Pantaleoni of England described the use of a sponge tent by the Sims' method to dilate the cervix. Twenty four hours later he introduced his modification of the Desormeaux endoscopy into the cavity of the uterus and cauterized a hemorrhagic necrotic growth with nitrate of silver.<sup>(2)</sup> This is the first description of endoscopic visualization of the endometrial cavity and use of the endoscopic tube as a channel to treat an abnormality and thus the birth of hysteroscopy in 1869.

Nitze (1877) added a lens system to the endoscopic tube that magnified the area being illuminated, and this lens system is the forerunner of the optical system of modern cystoscopy and all other endoscopes. Edison (1880) invented the incandescent lamp, and Newman (1883) describes an instrument using the incandescent lamp as a light source. Dittel, in 1887, placed a small incandescent

lamp bulb at the tip of the break of the cystoscope. Boisseau de Rocher (1889) separated the ocular part of the cystoscope from the sheath, thus allowing the use of multiple telescopes providing greater latitude of observation and making manipulation through the sheath possible. It was also in 1889 that Poirer, using Boisseau de Rocher's instrument, successfully catheterized both ureters in a living subject.

At the close of 19th century cystoscopy and other open-cavity endoscopic procedures such as proctoscopy, laryngoscopy, and esophagoscopy were well established and in daily use in most medical centers. Ott, a famous Petrograd gynecologist, was the first to introduce endoscopic inspection of the abdominal cavity. In this "ventroscopy" procedure he inspected the abdominal cavity with the help of a head mirror and a speculum introduced through a small anterior abdominal wall incision. He published articles on the clinical use of this technique in 1901, 1902 and 1903. A few months later in the same year at the 73rd Congress of German Naturalists and Physicians, Kelling, a surgeon from Dresden, demonstrated its use on a living dog into whose abdomen he had inserted a cystoscope for the purpose of examining the abdominal viscera. He called the procedure "celioscopy", which he described in his paper published in January 1902.