LAPAROSCOPIC GYNECOLOGIC SURGERY (COMPLICATIONS AND DIFFICULTIES)

"ESSAY"

Submitted for the Partial Fulfillment of Master Degree in Gynecology and Obstetrics

By

Emad Abou El-Maaty Mahmoud

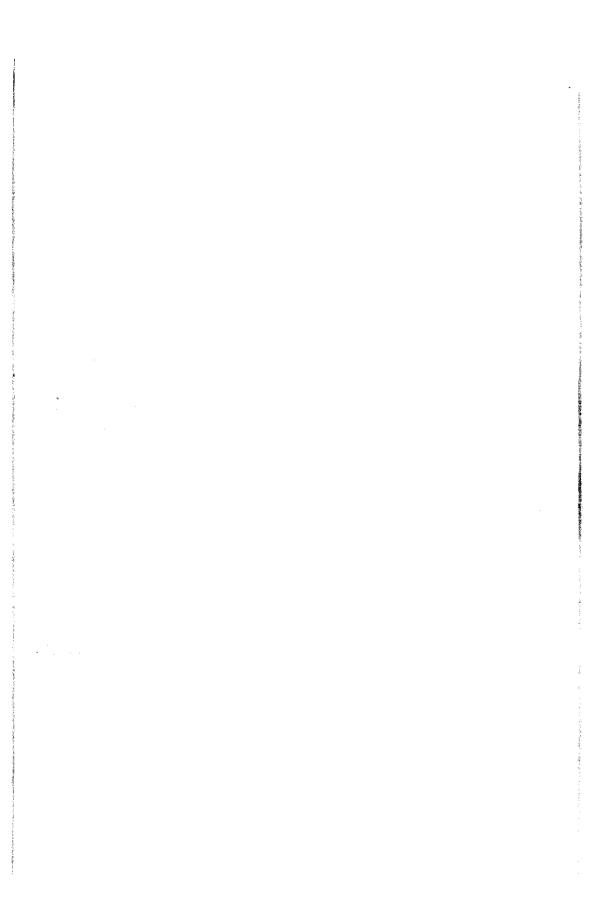
(M.B., B.ch)
Faculty of Wedicine, Cairo University (1988)
Resident of Gynecology and Obstetrics
Demietta Specialized Hospital

Supercisors

Prof. Dr. Gamal Abdel-Salam Wafa Professor of Gynecology and Obstetrics Faculty of Medicine, Ain Shams University

Dr. Khaled Mohamed Aziz Diab Assistant Professor of Gynecology and Obstetrics Faculty of Medicine, Ain Shams University

> Faculty of Medicine, Ain Shams University /997





LAPAROSCOPIC GYNECOLOGIC SURGERY (COMPLICATIONS AND DIFFICULTIES)

"ESSAY"

Submitted for the Partial Fulfillment of Master Degree in Gynecology and Obstetrics

Emad Abou El-Maaty Mahmoud

(M.B., B.cn)
Faculty of Medicine, Cairo University (1988)
Resident of Gynecology and Obstetrics
Demietta Specialized Hospital ← إ

Supewisors

Prof. Dr. Gamal Abdel-Salam Wafa Professor of Gynecology and Obstetrics Faculty of Medicine, Ain Shams University

Dr. Khaled Mohamed Aziz Diab Assistant Professor of Gynecology and Obstetrics Faculty of Medicine, Ain Shams University

> Faculty of Medicine, Ain Shams University

> > 1997

ACKNOWLEDGEMENTS

First of all, thanks to Allah, the most beneficent and merciful.

Second, It is difficult to translate my feelings toward Professor Dr. Gamal Abdel-Salam Wafa, because of his sincere initiating power, expert guidance, stimulating suggestions and constructive criticism during this work to be brought to light. It is a great honour to work under his supervision.

I wish to express my deep gratitude to Dr. Khaled Mohammed Aziz Diab, who kindly devoted a great deal of his work with instructive guidance, effective scientific supervision and invaluable assistance. Also, my deepest gratitude of my family, and my friends for their helpful assistance and moral support.

Emad Mahmoud 1997

CONTENTS)

	Page
* Introduction	1
# Aim of the work	5′
Chapter I Complications of operative Gynecologic	С
surgery (an overview and incidence)	6
Part 1 Complications related to posture	15
Part 2 Complications related to pneumoperitoneum	23
Part 3 Anesthetic complication	41
Part 4 Injuries by electrocautery and laser	48
Part 5 Vascular complications	58
Part 6 Urinary tract injuries	89
Part 7 Gastrointestinal injuries	124
Part 8 Genital organ complications	<i></i> 155
Part 9 Deaths related to laparoscopy	180
Part 10 Postoperative complications	182
○ Chapter II Difficulties encountered during	
laparoscopy	211
☀ Summary	266
* References	275
Appendix (figures)	337
* Arabic summary	



List of Tables

Table (1):	Laparoscopic complication: American	
	Association of Gynecological laparo-	
	scopists survey-1973.	8
Table (2):	Nature and rate of laparoscopic comp-	
	lications United Kingdom Survey.	10-11
Table (3):	Complications associated with opera-	
	tive laparoscopy.	12
Table (4):	Incidence of persistent trophoblastic	
	disease.	168
Table (5):	Risk of ectopic pregnancies following	
	sterilization methods.	178
Table (6):	Distribution of the maximum pain	
	scores in the bupivacaine and control	
	groups up to 4 h after operation	
	$(X_3^2 = 8.8, P < 0.05)$	189
Table (7-a):	Patients by type & number of incisions	219
Table (7-b):	Incidence of adhesions after previous	
	laparotomy.	219



INTRODUCTION

Although modern laparoscopic surgery dates back to the early 1900s, it is only in recent years that it has enjoyed a real renaissance. Modern technologic advances have led to the production of sophisticated, precision quality laparoscopic instruments, which have, in turn revolutionized the surgical procedures (*Schaer*, et al., 1995).

Operative laparoscopy has been termed "minimally invasive surgery". This is a misnomer. Adnexectomy or hysterectomy are equally invasive irrespective of the approach. A more realistic term for the laparoscopic approach is "minimal access surgery", since only the access route has been minimized. The term minimally invasive surgery also creates the perception that the operation is minor. This may swing decision in favour of an intervention in the face of doubtful indications (*Gomel*, 1995).

In the last 15 years, there has been an explosion of interest in minimal access surgery both from patients and doctors. That has been due to an increase in the

awareness of the advantages that laparoscopic surgery can offer: a smaller scar, less post-operative morbidity, less post-operative pain, a shorter hospital stay and a quicker return to normal life (Zaki et al., 1995).

Operative endoscopy can be modified for application to almost any existing cavity in the body and as instruments and techniques continue to improve, endoscopy will become more practical (Nezhat et al., 1995).

Laparoscopy has been used to perform all gynecological operations, ranging from simple procedures such as tubal sterilization and removal of ectopic pregnancy to the more complex techniques required to remove the ovaries, the uterus or pelvic lymph nodes.

Most gynecologists and some professional colleges, such as the American college of Obstetricians and Gynecologists, have agreed that laparoscopic surgery is a suitable, and in most cases, a preferable alternative to laparotomy for tubal sterilization, ectopic pregnancy, endometrioma, and ovarian cystectomy. However, laparoscopic oophorectomy and hysterectomy, and laparoscopic surgery for stage III and IV endometriosis are not performed by the majority of gynecologists,

although a small minority have used these techniques extensively. Laparoscopic techniques for genital prolapse and pelvic cancer are still under trial (Wood & Maher, 1996).

Laparoscopy is essentially a safe surgical procedure and complications are relatively rare (Gordon & Magos, 1989).

The rapid expansion of laparoscopic surgery was not achieved without attendant complications. Each of the individual instruments and procedures that are part of operative laparoscopic is associated with a variety of complications (*Painvain et al.*, 1995).

Regardless of the degree of care and caution exercised, complications can occur. Timely recognition of a complication is essential to proper management. As laparoscopic surgery becomes more complex, the ability to handle an increasing number of complications associated with operative laparoscopy appear to be low when procedures are performed by an experienced laparoscopist. The known rate of intra-operative and post-operative complication is less than 1%. The incidence of complication is related directly to the severity of pelvic and

abdominal pathology. Adhesions and endometriosis are contributing factors to urinary tract and intestinal injury (Nezhat et al., 1995).

To perform laparoscopic operations successfully and with the least frustration, the surgeon and surgical team need to understand how the laparoscopic equipment works, and they must be able to diagnose, manage and prevent the most common technical problems (*Duh*, 1995).

A surgeon who is poorly trained or has minimal skills and experience, finds that many cases are "difficult". Nevertheless, even those with appropriate skill and experience encounter intellectual and technical challenges in laparoscopy (*Halpern*, 1996).

There are some difficulties during laparoscopy. The cause of these difficulties can be categorized in two ways:

- 1- Pre-existing difficulties.
- 2- Difficulties that develop intra-operatively.

Pre-existing difficulties include abdominal wall scars or intra-abdominal adhesions, body build characteristics and abnormal tissue characteristics or relationship.