A COMPARISON BETWEEN THE USE OF LAPAROSCOPE IN VAGINAL HYSTERECTOMY AND THE TRADITIONAL VAGINAL HYSTERECTOMY

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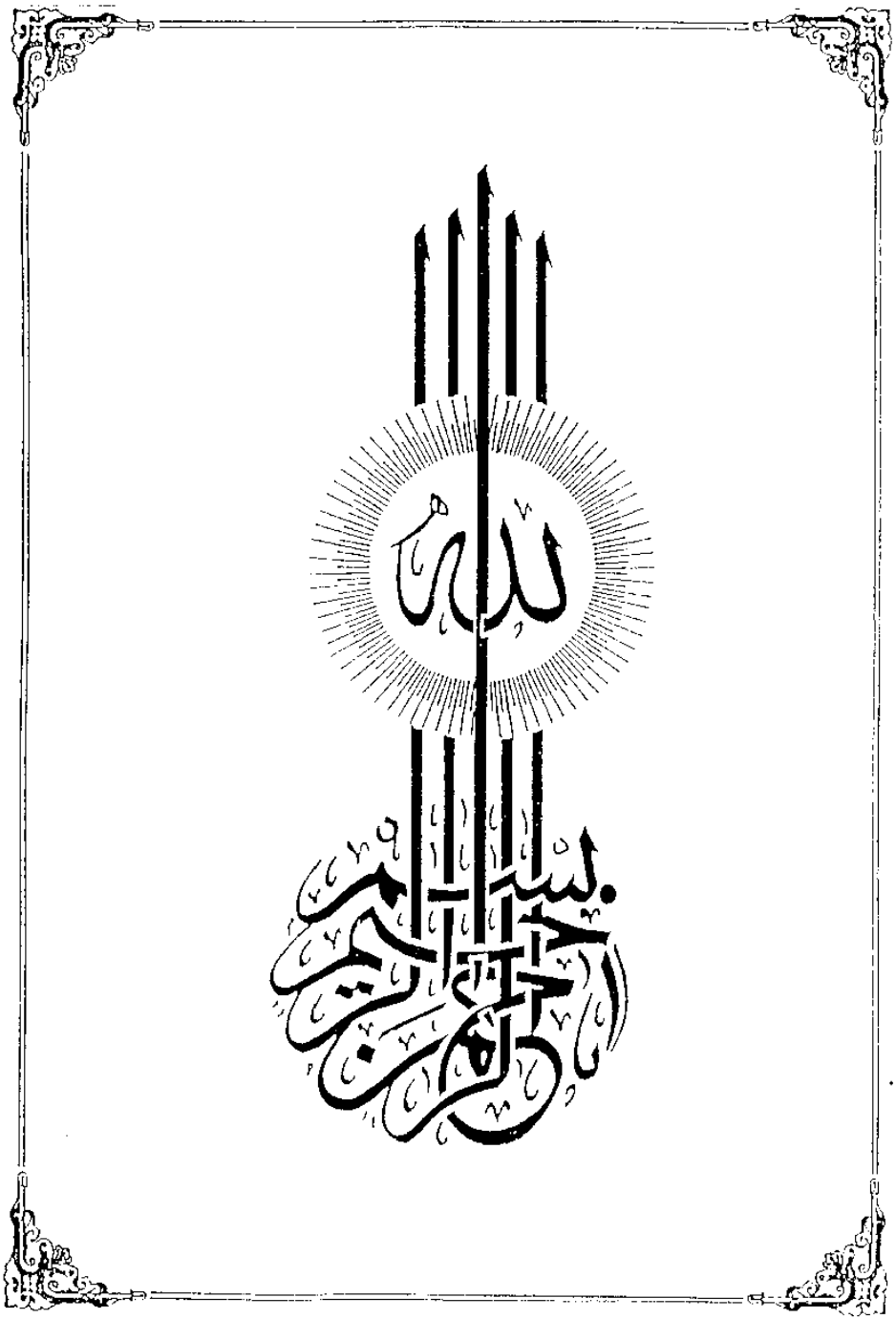

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INTRODUCTION

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INTRODUCTION

Of the 600,000 hysterectomies performed each year . over 60 % are presently accomplished by using an abdominal incision . **(Bachmann , 1990) .**

Abdominal hysterectomy will probably become a rarely used procedure, however , because laparoscopy , properly applied , can be effectively used to accomplish a less invasive vaginal hysterectomy .

There are many surgical advantages to laparoscopy , particularly magnification of anatomy and pathology , easy access to the vagina and rectum , and the ability to achieve complete hemostasis and clot evacuation during underwater examination . Patient advantages are many . They include avoidance of a painful abdominal incision, reduced duration of hospitalization and recuperation , , and an extremely low rate of infection and ileus .

Laparoscopic hysterectomy (LH) , first performed in January 1988 , has stimulated general interest in the laparoscopic approach to hysterectomy that has reached its zenith in laparoscopic assisted vaginal hysterectomy **(L.A.V.H) . (Reich , 1994) .**

L.A.V.H is a vaginal hysterectomy after laparoscopic adhesiolysis , endometriosis excision , or oophorectomy **(Summitt et al ,1992) (Minelli et al, 1991) (Maher et al , 1992).** Unfortunately , this term is also used to refer to staple ligation of the upper uterine blood supply of a relatively normal uterus .

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The goal of vaginal hysterectomy , LAVH or LH, is to safely avoid an abdominal wall incision . The surgeon must remember that if vaginal hysterectomy is possible after ligating the utero- ovarian ligaments , it should be done .

Unnecessary operations should not be done because of the surgeon's preoccupation with the development of new surgical skills. Laparoscopic hysterectomy is not indicated when vaginal hysterectomy is possible . **(Reich , 1994)**

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AIM OF THE WORK

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To Compare between the use Laparoscope in vaginal hysterectomy and the traditional vaginal Hysterectomy .

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REVIEW OF LITERATURE

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LAPAROSCOPY

Laparoscopy is not new and has been termed abdominoscopy , splanchnoscopy , (Operative) pelviscopy , (video) laseroscopy , celioscopy , and peritoneoscopy . Diagnostic laparoscopy dates back to a 1910 report by the swedish physi0cian Jacobaeus **(Jacobaeus , 1910).**

Poor light delivery , suboptimal optical systems, and the difficulty of operating while bent over a direct- view scope delayed advancements . The first video endoscopy was perfomed in 1956 , but poor resolution and lack of color limited its use **(Soulas, 1956).** The Hopkins glass fiber rod lens system introduced in the 1950s provided the need optical clarity of the laparoscope. This was accomplished by replacing the air spaces within the scope with optical glass **(Berci et kont, 1969).** The first CO_2 insufflator was introduced by Semm , and its use was documented in 1966 **(Eisenberg , 1966) .** An automatic insufflator was introduced the following year . The high intensity light source was introduced in 1969 . These advances spurred the development and wide-spread use of direct-view laparoscopy for diagnostic and simple operative procedures.

As long ago as 1973 the first laparoscopic salpingo-oophorectomy was performed by Semm in Germany **(Semm , 1982) ,** and the first salpingectomy for ectopic prengancy was performed by shapiro and Adler in the united states . **(Shapiro and Adler 1973).**

Color video laparoscopy was first performed in 1974 with bulky equipment and insufficient camera resolution. Circon ACMI (Stamford, conn) manufactured the first high resolution color tube in 1984 . The development of whiter light sources (e.g. xenon , metal halide) , more reliable (high - flow) CO_2 insufflators, and the microprocessor chip (charge coupled device (CCD) high - resolution camera

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(1988) ushered in the modern era of video laparoscopy . In that same year , the first laparoscopic lymphadenectomy was performed in France by **Querleu et al , 1991** . The first laparoscopic hysterectomy was reported the following year by **Reich et al , 1989 .**

The first laparoscopic assisted radical hysterectomy was reported in 1992 by **Nezhat et al .**

Laparoscopic procedures

Laparoscopic procedures are either diagnostic or operative . Operative procedures may by :-

- Simple e.g. tubal ligation , cyst aspiration .
- Intermediate e.g. salpingotomy , adhesiolysis.
  Advanced e,g. ovarian cystectomy , salpingo-oophorectomy , myomectomy , hysterectomy , lymphadenectomy .

There is a variety of procedures for which laparoscope is useful as an aid to hysterectomy . It is important that these different procedures be clearly delineated .

* Diagnostic laparoscopy with vaginal hysterectomy :

Is use of the laparoscope for diagnostic purposes, when indications for a vaginal approach are equivocal , to determine whether vaginal hysterectomy is possible **(Kovac et al , 1989)** . It also ensures that vaginal cuff and pedicle hemostasis is complete and allows clot evacuation .

*** Laparoscopic - assisted vaginal hysterectomy :**

Is a vaginal hysterectomy after laparoscopic adhesiolysis , endometriosis excision , or oophorectomy

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(Summitt et al , 1992) . Unfortunately this term is also used to refer to staple ligation of the upper uterine blood supply of a relatively normal uterus. It must be emphasized that in most cases the easy part of both abdominal and vaginal hysterectomy is upper pedicle ligation .

*** Laparoscopic hysterectomy :**

Denotes laparoscopic ligation of the uterine arteries either by electrosurgical desiccation , suture ligature, or staples .All manoeuvers after uterine vessel ligation can be done vaginally or laparoscopically , including anterior and posterior vaginal entery , cardinal and uterosacral ligament division , uterine removal intact or by morcellation , and vaginal closure vertically or transversely .

*** Total laparoscopic hysterectomy :**

It is a laparoscopically assisted abdominal hysterectomy. Laparoscopic dissection continues until the uterus lies free of all attachements in the peritoneal cavity .The uterus is removed through the vagina with morcellation if necessary . The vagina is closed with laparoscopically placed sutures.

*** Laparoscopic supracervical hysterectomy :**

It has recently regained advocates after suggestions that total hysterectomy results in a decrease in libido **(Lyons , 1993)** . It seems that the cervix plays an important role in the arousal phase of intercourse and quality of orgasm in many women .

*** Laparoscopic subtotal hysterectomy :-**

was first described by Semm . His technique, called classic abdominal SEMM hysterectomy (CASH), involves

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securing the ovarian pedicles with laparoscopic sutures, using the calibrated uterine resection tool (CURT) to ream out a cylinder of tissue from the cervix to the fundus , removing the transformation zone and , after placing endoloops over the cervical isthmus , the uterus is transected supra cervically and removed from the abdomen by morcellation .

* **Laparoscopic pelvic reconstruction with vaginal hysterectomy :**

It is useful when vaginal hysterectomy alone cannot accomplish appropriate repair for prolapse. Ureteral dissection and suture placement before the vaginal hysterectomy aid in high uterosacral ligament identification and plication near the sacrum .Levator muscle plication from below or above is often necessary . Retropubic colposuspention can also be done laparoscopically .

(Reich , 1994).

Advantages of operative laparoscopy

The advantages of operative video laparoscopy (descriptive term chosen to best encompass this new- wave laparoscopy) are many , such as : avoidance of large painful skin incision , less intra operative blood loss, reduced post operative pain , shorter hospital stay , more rapid convalescence , less infectious morbidity , reduced tissue trauma , reduced post operative adhesion formation & cosmetic .

Levine **(Levine ,1985)** Compared hospital cost and post operative stay for patients undergoing lysis of adhesions , adnexectomy , or myomectomy . He found that these procedures performed laparoscopically resulted in a

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savings of $ 1, 600 and 4 hospital days when compared with laparotomy .

Zouves et al ,1992 and **Brumsted et al , 1988** demonstrated a statistically significant reduction in post operative narcotic use , length of surgery , hospital stay , and days to return to work for ectopic pregnancies treated by laparoscopy versus laparotomy .

Vermesh et al , 1989 performed a prospective randomized evaluation of linear salpingostomy for ectopic pregnancy and compared laparoscopy and laparotomy .The laparoscopy group had a statistically significant reduction in estimatied blood loss , length of hospital stay , and hospital costs. Post operative tubal patency and intrauterine and ectopic pregnancy rates did not differ.

Baumann et al , 1991 in a non randomized prospective cohort study of ectopic pregnancy , demonstrated a statistically significant reduction in hospital stay , weeks until return to domestic and work activities, hospital costs , drug costs, and disability payments .

Nezhat et al , 1992 in a comparison of ten cases of hysterectomy performed by laparoscopy and ten by lapartomy , showed a reduction in estimated blood loss, hospital stay , and weeks to recovery of normal function .

(Adelson , 1994) ,

Disadvantages of operative laparoscopy

They result from the difference between operative laparoscopy and laparotomy . Where as laparotomy is largely guided by tactile sensation , the sense of touch is limited in laparoscopy . Laparoscopy is guided by video viewing, which requires a spatial reorientation . Not only we are not touching the tissue with fingers , we are not even looking directly at the operative site. Additionally , current

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