LAPAROSCOPIC PARAVAGINAL REPAIR IN MANAGEMENT OF PROLAPSE OF THE ANTERIOR VAGINAL WALL (PARAVAGINAL DEFECTS)

Thesis Submitted for Partial Fulfillment of
M.D. Degree in Obstetrics & Gynecology

BY

Yacoub Ishac Ibraheem

M.S. Degree in Obstetrics and Gynecology-Ain Shams University

Under Supervision of

Professor Dr. Mohamd Abd El-Haleem Mehanna

Professor of Obstetrics and Gynecology
Faculty of Medicine- Ain Shams university

Professor Dr. Gamal Abd El-Salam Wafa

Professor of Obstetrics and Gynecology
Faculty of Medicine- Ain Shams university

Faculty of Medicine
Ain Shams University
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تحت إشراف

الأستاذ الدكتور/ محمد عبدالحليم مهنا
أستاذ أمراض النساء والتوليد
كلية الطب – جامعة عين شمس

الأستاذ الدكتور/ جمال عبدالسلام وفا
أستاذ أمراض النساء والتوليد
كلية الطب – جامعة عين شمس

كليـة الطب
جامعـة عيـن شمـس
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INTRODUCTION

Pelvic organ prolapse is the downward displacement of structures that are normally located adjacent to the vaginal vault. Because these displacements are each associated with a defect in support structures, they may each be considered hernias. These conditions are common, affecting a progressively larger percentage of women as age advances. Whereas mortality is negligible, significant morbidity is associated with prolapse. Women in developed countries who have access to modern health care can benefit from the advances that have been made in treating prolapse. If the problem is viewed from a worldwide perspective, however, the scope of suffering is much greater. In areas of high parity and little or no access to health care, countless women suffer from problems associated with pelvic organ prolapse with no real possibility of resolution. The direct effect that these conditions have on urinary, gastrointestinal, and sexual functions can only be appreciated by those women burdened with these problems on a daily basis **(Te Linde, 1966).**

The anterior vaginal wall supports the bladder and the urethra. The anterior vaginal wall supportive layer called the pubocervical fascia. Its name is based upon its two ends of attachment. It attached distally to the pubic bone area and proximally to the cervix if the uterus has not removed. The pubocervical fascia is also attached laterally (on both sides) to the pelvic floor muscles, specifically the obturator internus muscle. As long as this vaginal wall stays in place the bladder and urethra will stay in its normal anatomical position. When there is break in the pubocervical fascia there is a loss of support of the urethra and/or bladder resulting in:

Cystocele: Loss of support at the level of the bladder "bladder drop"

Urethrocele: Loss of support at the level of the urethra. Can be diagnosed by doing a Q-tip test and often coexists with stress urinary incontinence.

Cystourethrocele: Loss of support of both the urethra and bladder. These two conditions most commonly coexist **(Miklos, 2000).**

Prolapse of the anterior vaginal wall may be due to site-specific fascial defects in the pubocervical fascia, which can classified as midline, transverse, lateral (paravaginal) or a combination. Attenuation or weakening of the endopelvic fascia may also contribute to the degree of prolapse **(Richardson et al., 1976)**

Lateral defect cystocele (paravaginal defect) is the most common anatomic defect that results cystourethrocele, occurring in 85% to 90% of women with the condition **(Richardson, 1976).**

Anterior vaginal wall prolapse is one of the most challenging aspects of surgical gynecology. The traditional midline anterior colporrhaphy was designed on the assumption that anterior vaginal wall prolapse was caused by attenuation and weakening of the fascial supports of the bladder and vaginal wall. White first described the paravaginal repair 1909 as an alternative to anterior colporraphy for the correction of cystocele **(White 1909, 1912).**

The concept of site-specific fascial defects popularized by **Richardson et al. (1976),** forms the basis for the current paravaginal defect repair, which can be performed abdominally, vaginally or laparoscopically.

In 1976, Dr.Richardson of Atlanta., after careful clinical observations and cadaver dissections proposed and emphasized that the vast majority of cystocele is not caused by stretching or attenuation of pubocervical fascia but that is a result of a break of pubocervical fascia from its attachments to the pelvic side walls. He called this defect “paravaginal defect” and he strongly advocated the use of paravaginal repair, instead of traditional anterior vaginal repair (anterior colporrhaphy), for the treatment of cystocele **(Richardson et al., 1976).**

Pelvic floor defects can be repaired abdominally, vaginally and laparoscpically. Ideally, the pelvic reconstructive surgeon ought to be able to operate by the three routes with the efficiency depending on the pathologic condition, the surgical indications and the patient's needs **(Nichols and Pearson, 2000).**

Aim of the Work

The aim of the work is to determine the value of the laparoscopic surgical technique of paravaginal defects repair.

Historical Evolution of Surgical Repair of Anterior Vaginal Repair

Pelvic organ prolapse is the downward displacement of structures that are normally located adjacent to the vaginal vault. Because these displacements are each associated with a defect in support structures, they may each be considered hernias. These conditions are common, affecting a progressively larger percentage of women as age advances. Whereas mortality is negligible, significant morbidity is associated with prolapse. Women in developed countries who have access to modern health care can benefit from the advances that have been made in treating prolapse. If the problem is viewed from a worldwide perspective, however, the scope of suffering is much greater. In areas of high parity and little or no access to health care, countless women suffer from problems associated with pelvic organ prolapse with no real possibility of resolution. The direct effect that these conditions have on urinary, gastrointestinal, and sexual functions can only be appreciated by those women burdened with these problems on a daily basis **(Te Linde, 1966).**

Treatment of pelvic organ prolapse and the associated symptoms constitutes a major subject in gynecology. Especially in the advanced state, treatment of these conditions is one of the most challenging problems pelvic surgeons can face. Indeed, success in treating prolapse is frequently used to judge the skill of those surgeons. Providing permanent relief from this classic malady, by restoring normal anatomy and maximum physiologic function, always tests the ingenuity of gynecologists. As medical sophistication has progressed, so has the ability to understand more completely and better treat pelvic organ prolapse.

Evolution may be considered as change from original to the current state. Relating this to vaginal support, basic vaginal supportive anatomy remains unchanged. However, many therapeutic alternatives have evolved in attempts to repair supportive defects. Some of these procedures have been logical and appropriate, but many have used anatomically unsound principles resulting in kinking, obstruction, or other compensatory distortions **(Baden and Walker, 1987).**

Important highlights in the history of treatment of uterine prolapse were described by Phaneuf, by Te Linde, by Ricci, and by others. Mentioned in the writings of Hippocrates and Galen, the condition received little attention for many centuries. Unfortunately, this is still true today in some developing countries in the world. Long before the advent of modem surgery, various supports and pessaries and other ways of maintaining the uterus in its normal position were devised. Vaginal packing, tampons, massages, and exercises were used with some degree of success **(Phaneuf, 1935; Te linde, 1966; Ricci, 1952).**

Some patients were suspended from their feet for 24 hours in an attempt to achieve cure. Rodericus A. Castro advised that prolapse should be attacked with a red hot iron as if to burn it, "when fright would cause it to recede into the vagina."

Various caustics were applied to the vagina: silver nitrate, by Meding; nitric acid, by Phillips; acid nitrate of mercury, by Lougier; red hot iron, by Velpeau, Kennedy, Dieffenbach, and Degranges; and sulfuric acid, by Selnow, Richter, Hedrich, and Rokitanski **(Emge et al., 1966).**