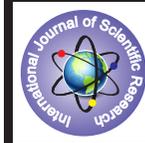


Suspension With Round Ligaments- an Alternative Approach for Vault Suspension in A Case of Three Consecutive, Failed Conservative Surgeries For Prolapse



Medical Science

KEYWORDS : Recurrent uterovaginal prolapsed, Round ligament suspension

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ABSTRACT

Introduction- Pelvic organ prolapse (POP) affects millions of women worldwide. The prevalence of pelvic floor disorders in India is one of the highest in the world.

Case report- In our case of previous multiple failed conservative surgeries, with recurrent uterovaginal prolapse, a total abdominal hysterectomy was done followed by suspension of vaginal vault to bilateral round ligaments.

Conclusion- Round ligament with in situ assessment and refashioning can be used as native tissue to suspend the vaginal vault as a prophylactic measure and also as a therapeutic procedure in selected cases of recurrence of prolapse.

Introduction-

Pelvic organ prolapse (POP) affects millions of women worldwide; approximately 200,000 inpatient surgical procedures for prolapse are performed annually in the United States.¹

The prevalence of pelvic floor disorders in India is one of the highest in the world. (7%-20%).

Almost 50% of Indian women experience some type of pelvic floor disorder during their lifetime.

In our case of previous multiple failed conservative surgeries, with recurrent uterovaginal prolapse, a total abdominal hysterectomy was done with suspension of vaginal vault to bilateral round ligaments.

Case report-

39 year old patient Para 1 Living 1 came to the gynaec opd at our tertiary hospital in January 2013 with chief complaints of recurrence of mass per vaginam since 1 year. Patient first started having these complaints 12 years back in 2002 following her first delivery which was a full term vaginal delivery for which she underwent Abdominal cervicopexy in 2003. However she had a recurrence of symptoms one year later for which in 2006 she underwent a Nadkarni's sleeve resection with anterior colporrhaphy with posterior colpoperineorrhaphy. Unfortunately, this surgery too failed and in 2011 she was operated for Shirodkar's sling surgery.

Despite the sling surgery, she reported 2 years later at our hospital with something coming out per vaginam. She had regular menstrual cycles with no bowel or bladder complaints including Stress Urinary Incontinence. Other medical, personal and family history was non-contributory.

On examination, vitals were stable. Per Abdomen – was soft with no guarding, tenderness and rigidity. Two Pfannenstiel scars were present and were healthy.

On Per Speculum examination, cervix was congested and hypertrophied with a third degree uterovaginal descent. Scar of previous perineal repair was seen. UCL was 3.5 inches. No demonstrable stress urinary incontinence.

On per vaginam examination, uterus was bulky, retroverted,

freely mobile with bilateral fornices being free and nontender.

Patient was hospitalised for daily tamponing for 10 days to reduce the cervical congestion.

In view of her previous surgeries abdominal route was chosen in anticipation of difficulty in vaginal procedure.

Baseline pre-operative investigations were done.

Spinal anaesthesia was given. Patient was taken in supine position.

Suprapubic tranverse incision was taken.

Multiple dense adhesions were encountered while opening the abdomen till the parietal peritoneum in view of her previous surgeries.

In situ findings - Uterus was bulky, bilateral ovaries and fallopian tubes were found to be normal in size and appearance.

Mersilene tape could be seen posteriorly along the uterosacral ligaments. Figure 1 around here. Figure 1 shows the mersilene tape that was seen along the uterosacral ligaments.



Mersilene tape could be seen posteriorly along the uterosacral ligaments.

The tape was also felt at the sacrum. The tape had detached from the fixed point that is the sacral promontory with resultant recurrence of prolapse- apical prolapse.

Total abdominal hysterectomy was done. Vaginal vault suspension was done to round ligaments on either side after refashioning the round ligaments- shortening them. Round ligaments being used for vault suspension seen in figure 2. Figure 2 around here.



The round ligaments being used for vault suspension.

Moschowitz repair was done to prevent enterocele.

Total operative time – 2 hours. Approx. Blood loss – 200 ml

Post-operatively, IV antibiotics were given for 3 days f/b oral antibiotics.

Foleys catheter was removed on day 2.

Post op period was uneventful. Patient was discharged on day 5.

She was advised rest for 6 weeks and to avoid strenuous activities.

Suture removal was done on day 10- wound was healthy.

Patient is following up with us for the past two years now and has no recurrence of symptoms.

Discussion-

Pelvic Organ Prolapse is not a mortal disease, but its morbidity is common.

The choice of a primary surgical procedure for women with POP depends upon a variety of factors including age, site of prolapse, desire of future child-bearing, menstrual functions, health status and last but not the least patient preferences. 1

The first attempt at surgery has usually the best chance of success.

Secondary corrective surgery is to be done against the background of tissue damage and scarred tissue.

Success in addressing the prolapse is less guaranteed with repetitive surgery.2

The previous surgery renders assessment as well as the redo surgery difficult due to tissue scarring and removal of tissue with the primary surgery

In patients with POP desirous of hysterectomy, just a hysterectomy will not cure uterovaginal prolapse. Hysterectomy allows the surgeon to visualize and use the supportive structures, at-

taching them to the vaginal vault

Various principles of vaginal fixation during hysterectomy are currently recognized. It is crucial for the surgeon to note the laxity of the supporting structures and attempt to repair this laxity at the initial operation.

Attaching the pelvic supportive structures to the vagina, repairing an obvious or potential enterocele, and using appropriate adjunct procedures are some of the surgical approaches to providing support to the vaginal cuff. 3

In this case, in spite of it being a case of third degree uterovaginal prolapse, the hysterectomy was done abdominally, vault suspension was also done abdominally. In view of previous two abdominal surgeries and one vaginal repair, opening the abdomen and proceeding with the hysterectomy was a surgical challenge.

Using round ligaments for vaginal vault suspension – In this case achieving an effective vault suspension was most important given her multiple recurrences.

In view of previous failed Shirodkar's surgery, the round ligaments were chosen over the uterosacrals to suspend the vaginal vault after refashioning the round ligaments- shortening the medial half.

The round ligaments are musculofibrous flattened bands between 10 and 12 cm. in length, situated between the layers of the broad ligament in front of and below the fallopian tubes.

Commencing on either side at the lateral angle of the uterus, this ligament is directed forward, upward, and laterally over the external iliac vessels.

It then passes through the abdominal inguinal ring and along the inguinal canal and inserted into the labium majus. At its medial end, the round ligament is mainly composed of non-striated muscle and at its lateral end it is made up of fibrous tissue. It is sturdy and fixed at its lateral end and becomes lax at its medial end. 4

In a study by Azar Danesh et al, (published in the Journal of Research in Medical Sciences, March 2012), 26 patients underwent abdominal round ligament colpopexy (ARLC) in which the vaginal apex was tied to the remaining part of the round ligament. The repair was successful in 24 patients with recurrences in only two.

Thus according to this study, ARLC can be considered as a simple, safe and cost-effective alternative technique for vaginal vault suspension after hysterectomy. 5

A new surgical method of Suprapubic and Extraperitoneal Approach with Uterine Preservation for Pelvic Organ Prolapse: named as Kurt Extraperitoneal Ligamentopexy has been described in a study by Sefa Kurt et al published in the journal of ISRN Obstetrics and Gynecology ,Volume 2013

In this technique, the ends of the round ligaments are fixed to the anterior rectus fascia for uterine suspension.

In this study, twenty symptomatic women with grades 2-4 POP diagnosis who opted to choose this alternative surgery were retrospectively analyzed. Results. A total of 22 cases were included. The mean age of the patients was years (29-72 years).

Uterine descensus was present in all patients, and additionally cystocele in 9 patients (45%), cystocele in 6 patients (30%), rectocele in 4 patients (20%), and cervical elongation in 6 patients (30%) were diagnosed. In addition to the alternative surgery, Manchester procedure and anteroposterior vaginal wall repair or Burch procedure was performed where necessary.

Mean follow-up time was months (6–171 months). No recurrence of POP occurred.

They have concluded that suprapubic, extraperitoneal, and minimally invasive ligamentopexy of the round ligament to the anterior rectus fascia offers an alternative to conventional POP surgery with favorable outcomes without any recurrence. 6

Laparoscopic plication and suspension of the round ligaments has been used successfully to relieve pain in selected patients with various degrees of uterine retroversion. 7

For patients experiencing chronic pelvic pain associated with uterine retroversion, round ligament plication is an effective method of repositioning the uterus and reducing or eliminating the patient's symptoms. 8

In another interesting study, laparoscopic application of Falope rings to the round ligament was effective for uterine suspension in 3 women. Laparoscopy was performed as usual, and 1 Falope ring was applied to plicate the round ligament, shortening it about 3 cm for each ring. Some women required more than 1 ring to suspend the uterus. 9

Conclusion-

Round ligament with in situ assessment and refashioning can be of use as native tissue to suspend the vaginal vault as a prophylactic measure and also as a therapeutic procedure in selected cases of recurrence of prolapse.

Thus round ligament may be considered as a new approach for vault suspension.

However, further studies will be required to determine whether this procedure stands the test of time

Conflict of Interest-

"The author(s) declare(s) that there is no conflict of interest regarding the publication of this manuscript."

References-

1. Pelvic organ prolapse in women: Choosing a primary surgical procedure Author J Eric Jelovsek, MD, MMed, FACOG, FACS, Section Editor Linda Brubaker, MD, FACS, FACOG, Deputy Editor Kristen Eckler, MD, FACOG
2. <http://pelvicreconstruction.blogspot.com/feeds/posts/default?alt=rss>
3. Cruikshank, S, Glob. libr. women's med., (ISSN: 1756-2228) 2009; DOI 10.3843/GLOWM.10059
4. http://intranet.tdmu.edu.ua/data/kafedra/internal/anatomy/classes_stud/en/med/lik/ptn/1/17%20FEMALE%20REPRODUCTIVE%20SYSTEM.%20OVARY,%20UTERUS,%20UTERINE%20TUBES..htm
5. Introducing an easy new surgical method for repairing vaginal vault prolapse Azar Danesh Shahraki, Awat Feizi, Journal of Research in Medical Sciences | March 2012 Special Issue (2)
6. A New Surgical Method of Suprapubic and Extraperitoneal Approach with Uterine Preservation for Pelvic Organ Prolapse: Kurt Extraperitoneal Ligamentopexy Sefa Kurt,1 Mehmet Tunc Canda,2 and Abdullah Tasyurt1 ISRN Obstetrics and Gynecology Volume 2013 (2013), Article ID 748232, 5 pages <http://dx.doi.org/10.1155/2013/748232>
7. Laparoscopic Plication and Suspension of the Round Ligament for Chronic Pelvic Pain and Dyspareunia November 2000 Volume 7, Issue

4, Pages 547–551.

- 8.
9. The Journal of reproductive medicine (Impact Factor: 0.58). 04/2002; 47(3):211-6. Source: PubMed
10. Laparoscopic uterine suspension with falope rings: a report of three cases. <http://www.ponline.org/node/355447#sthash.aOmWjKI2.dpuf> JOURNAL OF REPRODUCTIVE MEDICINE. 1987 Nov; 32(11):859-61. - See more at: <http://www.ponline.org/node/355447#sthash.aOmWjKI2.dpuf>