

Unilateral Sacrospinous Colpohysteropexy: Uterus Preserving Surgery for Uterovaginal Prolapse

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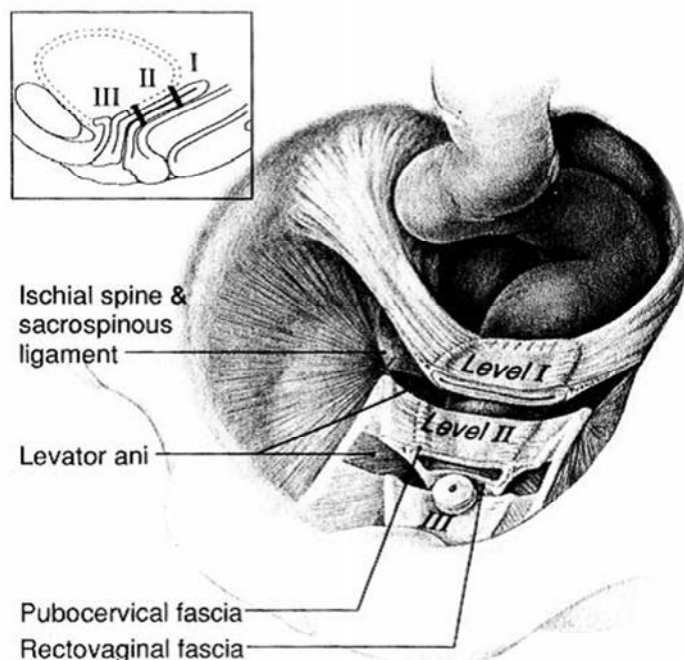
ABSTRACT

Attitudes towards sexuality and the psychological value of reproductive organs have changed over the last few decades. Nevertheless, Vaginal hysterectomy with repair of pelvic support defects is still the leading treatment for pelvic organ prolapse (POP). Over the last 10 years, however, interest has been growing in uterus-sparing surgery, done vaginally, abdominally or laparoscopically. The majority of studies on uterus-preserving surgery, with the exception of abdominal techniques, report few cases with short follow-up. Sacrospinous hysteropexy is the most studied vaginal technique for uterus preservation and favourable results have been demonstrated. Consensus is growing that the uterus can be preserved, at the time of pelvic reconstructive surgery, in appropriately selected women, who desire it. The results of comparison trials and prospective studies confirm that uterus-saving surgery is feasible and is comparable to traditional hysterectomy in terms of short and long-term end results. Surgeons should be ready to respond to the wishes of patients who want to retain their uterus and conserve vaginal function.

Keywords: Pelvic Organ Prolapse (POP), Uterus-preserving surgery, sacrospinous hysteropexy

1. INTRODUCTION

According to study done by Sleiker-ten Hove et al. (2009) pelvic organ prolapsed (POP) is a common problem affecting upto 40% of women over 50, with disturbing negative impact on quality of life. As per retrospective cohort study done by Olsen et al., (1997) the life-time risk for women to undergo surgery for this disruptive malady is 11%,



with 30% of these women needing additional surgery for prolapse recurrence. Surgery for pelvic organ prolapse has evolved over the past 200 years and continues to be influenced by dynamically changing concepts, involving not only newer approaches to the difficult problem of recurrent pelvic organ prolapse, but also a renewed understanding of pelvic floor anatomy. Brummen et al., (2003) concluded that and also results of SAVE U trial conducted by Renee et al., (2011) have shown increased risk for bladder dysfunction and new-onset stress incontinence after vaginal hysterectomy. As per study done by Dietz et al., (2007) sacrospinous ligament fixation has proven to be an effective treatment for both vaginal vault prolapse as well as uterine procidentia concomitantly with vaginal hysterectomy. Many authors such as Zucchi et al., (2010), Hefni et al., (2003), Maher et al., (2001), Richardson et al., (1989) concluded that this procedure can also be used in women who want to preserve the uterus to retain fertility. Hefni et al., in his study in 2006 have shown that sacrospinous hysteropexy is an anatomically as well as functionally efficient and safe procedure.

2. CASE REPORT

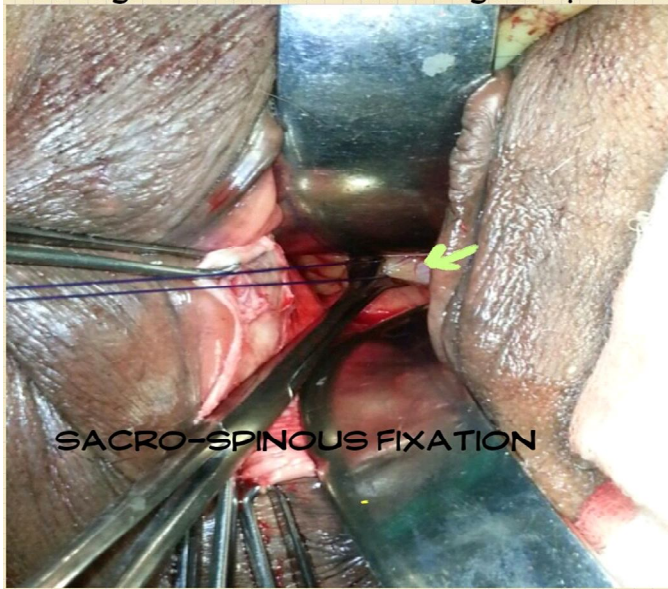
Our patient, 37years old, Para-3 complained of something coming out per-vaginum, low backache, vaginal pain, sexual difficulty since one year. Menstrual cycles, bowel, bladder were normal. Speculum examination revealed second degree UV-descent with minimum cystocele. Per-vaginal exam showed normal sized uterus, both fornices free and non-tender. Pap-smear was suggestive of inflammation. Abdomino-pelvic ultrasound was unremarkable. Patient wanted to get relief of symptoms without removing her uterus. She was thoroughly investigated and posted for sacrospinous ligament fixation as the treatment for UV-Prolapse as uterus preserving surgery. At surgery, slow and judicious sharp and blunt dissection was used to meticulously identify the right sacrospinous ligament. At all times, rectum was kept away using per-rectal finger and a strategically placed Dever's retractor. We advocate to use three thin bladed Dever's retractors, at strategic sites as the norm. This ensures adequate exposure to the ligament along with safe-guarding vital structures, namely bladder and rectum. Two non-absorbable sutures (Prolene 1-0) were placed through sacrospinous ligament and subsequently anchored securely to vagina at its highest point. The procedure took 25 minutes and blood loss was around 30cc. Patient was discharged on Day 4. Barring buttock pain, lasting 3 days, relieved with mild analgesic, patient remained comfortable post-operatively. Periodic follow-up at 2 weeks, 3, 6, 12, 18, 24 months, found the patient comfortable. She had improved sexual functioning and relief from all symptoms. She was highly satisfied with the procedure.

3. DISCUSSION

Sacrospinous ligament fixation has proven to be an effective treatment, for uterine prolapse, in women who want to preserve the uterus to retain fertility and/or menstrual function. Attitudes towards sexual function are changing with increased life-expectancy and women coming into their own as successful, financially independent individuals. Women wish to remain sexually active well into the later years of life and performing vaginal surgery without sacrificing vaginal length and depth becomes the real challenge. Sacrospinous fixation essentially involves hooking the vaginal apex high up onto the coccygeus-sacrospinous ligament(C-SSL) complex, thus elevating the apex above the levators. No vagina is sacrificed, thereby ensuring good vaginal length post-operatively. Fornices remain deep. Avoiding hysterectomy preserves pelvic nerves. Vascular supply to pelvic organs remains un-disturbed. Supporting pelvic floor structures are not disrupted and thus her sexual function is maintained. In his study Baumann et al. (2009) concluded that Sexual function after sacrospinous fixation for vaginal vault prolapsed is satisfactory, with few cases of de novo dyspareunia.

The C-SSL, comprises of both muscle and ligament, so forms a strong dynamic support for the vaginal apex. As there is no disturbance to surrounding structures, there are no urinary or bowel complaints. Minor complaints due to descensus such as backache, dull-perineal ache, heaviness in lower abdomen are significantly relieved. Time consumed in this procedure does not exceed 20-30 minutes. Blood-loss is around 30-40cc. The procedure requires

Arrow points to sacro-spinous ligament,exposed after fat of Ischio-rectal Fossa is carefully dissected away.Non-absorbable suture taken through it is anchored to vaginal apex .



some detailed training, as the ischial spine, to which the ligament is tethered, is deep within the true pelvis, buried in the para-rectal region amongst abundant fat of the ischio-rectal fossa. It is surrounded by many vital structures. Access requires, that one approach the ligament from the recommended space, avoiding chiefly the rectum and large para-rectal venous plexuses. With detailed training and expertise this procedure can be performed with increasing efficiency. We use three DEVER'S RETRACTORS, placed strategically (as shown in actual photograph of the surgery) so as to retract the rectum in the medial one, bladder and enterocele in the superior one and ischio-rectal fat in the infero-lateral Dever's retractor.

Uterus and vagina are supported on three different levels:

Level I suspension: The portion of the vagina adjacent to the cervix is suspended from above by the relatively long connective tissue fibres of the upper paracolpium (= tissue that attaches the vagina to the pelvic walls) and parametrium (= cardinal and uterosacral ligament complex).

Level II attachment: In the midportion of the vagina, the (lower) paracolpium becomes shorter and attaches the vaginal wall laterally to the pelvic wall. It consists of the pubocervical fascia and the rectovaginal fascia.

Level III fusion: Near the introitus the vagina infuses lateral to the

levator ani muscles and posterior to the perineal body while anterior it blends with the urethra. The three levels of support are continuous with one another and therefore interdependent. Specific defects in the different levels of supports cause specific types of genital prolapse and call for specific operations to address each particular defect. In case of a uterine decent, we have to restore the level I support. Delancey JO in his studyn of Anatomic aspects of vaginal eversion after hysterectomy (1992) concluded that the paracolpium in level I forms the critical factor that differentiates vaginal eversion from posthysterectomy cystocele-rectocele or enterocele in which the vaginal apex remains well suspended.

Although we know that the prolapsed uterus itself is not the cause but the result of weakening of the support systems, the uterus is most commonly removed in prolapse surgery. Little or more attention is paid to level I support of the vagina after a hysterectomy (sacrospinous ligament fixation, Mc Call culdoplasty, Moschcowitz-type procedure and peritoneal closure). When level I support is diminished, we have to restore level I support, which does not necessarily mean removing the uterus. In most cases, the uterus itself is small and 'healthy'. By removing the uterus, the surgical procedure becomes more extent with entry into the abdominal cavity which might be associated with more complications and a longer recovery time. Level I support can also be restored by performing a sacrospinous hysteropexy in which the uterus is retained. Advantages of preserving the uterus can be preserving fertility, shorter recovery time because of the less invasive character of the procedure, psychological motives in retaining the uterus and possibly less new onset urinary, defecatory and sexual symptoms because the nerves and vessels are less damaged. SAVE U trial (2011), is a randomized controlled non-inferiority multi-centre trial that shows efficacy of sacro-spinous fixation is comparable to traditional vaginal hysterectomy for POP2 or higher in terms of recurrence rates. Infact, sacrospinous fixation is associated with shorter hospital stay, quicker recovery and less post-operative pain.

4. CONCLUSION

Sacrospinous Ligament Fixation is increasingly emerging as an effective 'UTERUS SAVING SURGERY', for genital prolapse, in women wanting to retain their uteri with minimal chances of recurrence, complete relief of symptoms, maintenance of function and optimum satisfaction of the patient.

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