

## LAPAROSCOPIC SACRAL PROMONTORY UTERINE SUSPENSION FOR UTERINE PROLAPSE.

### Hypothesis / aims of study

Uterine prolapse is a common condition. Although surgical correction often involves hysterectomy, younger women may wish to avoid such a radical solution. A recent study describing suspension of the uterus from shortened uterosacral ligaments reported favourable results (1). Another group advocated uterine suspension from the sacrum using a laparoscopic technique (2).

The aim of this study was to evaluate the feasibility of suspending the prolapsed uterus from the sacral promontory for the treatment of uterine prolapse via a laparoscopic approach.

### Study design, materials and methods

This is a prospective uncontrolled study of 81 consecutive women treated by laparoscopic sacral promontory uterine suspension. As this study was considered a clinical audit, formal institution review board (IRB) approval was not sought.

The median age of the women treated was 44 years (range 30-70) and median parity was 2 deliveries (range 0-6). The assessment of surgical outcomes was by an investigator independently of the surgeons.

All subjects presented with uterine prolapse of grade 2 or more using the Baden-Walker halfway system (3). Eighty-three percent of the women had anterior vaginal wall prolapse, 77% had posterior vaginal wall prolapse, and 33% of the women had an enterocele.

Follow-up was by a standardized question sheet evaluating symptoms of prolapse, urinary symptoms, sexual function, visual analogue score (VAS: 0-100, 0=complete failure, 100=complete success), and vaginal assessment using the Baden-Walker halfway system.

*Surgical Technique:* Monofilamentous, non-absorbable, sutures were used to suspend the uterus from the sacral promontory. The sutures were placed into the supravaginal part of the posterior cervix at the level of the insertions of uterosacral ligaments and continued along the right uterosacral ligament to the sacral promontory. After insertion into the sacral promontory the suture was returned back along the right uterosacral ligament and reinserted into the cervix. The suture was then tied approximating the cervix towards the sacral promontory. A second suture was then placed, with care taken to close any suture bridges in the peritoneum. Concomitant anterior vaginal repair was performed in 35%, posterior vaginal repair in 91%, paravaginal repair in 82%, and continence surgery in 68%.

The primary outcome measures for success were:-

- 1) Subjective (no symptoms of prolapse)
- 2) Objective (prolapse at vault < grade 2 Baden-Walker classification)
- 3) Visual analogue score  $\geq$  80 out of 100).

### Results

The mean follow-up period was 20.2 months (range 7-31). Of the 81 subjects, 75 (92.6%) were available for follow-up. Fifty-four (66.7%) returned for review, including examination, and 21 were assessed by telephone interview.

The primary outcome measures are reported in table 1.

**Table 1. Primary long-term surgical outcomes for surgery.**

Outcome for Surgery	Failure	Success
<b>Symptomatic prolapse</b> (n=75)	<b>Yes</b> 9 (12%)	<b>No</b> 64 (88%)
<b>Cervical prolapse <math>\geq</math> grade 2</b> (n=54)	<b>Yes</b> 3 (5.6%)	<b>No</b> 49 (94.4%)
<b>Satisfaction by VAS (0-100)</b> (n=75)	<b>&lt;80</b> 13 (17.3%)	<b><math>\geq</math>80</b> 60 (82.7%)

### **Interpretation of results**

There are numerous techniques described for the management of uterine prolapse. Laparoscopic suture hysteropexy with plication of the uterosacral ligaments and reattachment of the ligaments to the cervix demonstrated a 21% recurrence of uterine prolapse. Recurrent prolapse may be due to defects in the uterosacral ligaments, near or at the sacrum, not repaired during the hysteropexy. With the laparoscopic sacral promontory uterine suspension, the right uterosacral ligament is repaired and attached to the longitudinal sacral ligament. This leaves two strong points of attachment, the posterior supravaginal cervix and ligament of the sacral promontory. The vaginal axis and uterus are restored to an acceptable anatomical position. This technique requires minimal dissection of the peritoneum, potentially lowering the risk of de novo bowel and bladder dysfunction.

Recurrent uterine prolapse following laparoscopic sacral promontory uterine suspension is uncommon (5.6%).

### **Concluding message**

Laparoscopic sacral promontory uterine suspension for uterine prolapse approximates the posterior cervix towards the sacral promontory by plicating and repairing the uterosacral ligament in its entirety. This surgical technique is both feasible and effective management for uterine prolapse without recourse to hysterectomy.

### **Reference**

1. Laparoscopic suture hysteropexy for uterine prolapse. *Obstet Gynecol* 2001; 97(6): 1010-1014.
2. Laparoscopic sacral suture hysteropexy. *Proceedings IUGA Prague Meeting, Int Urogynecol J* 2002; 13: S35.
3. Genesis of the vaginal profile: a correlated classification of vaginal relaxation. *Clin Obstet Gynecol* 1972; 15: 1048-54.