

# Transvaginal Sacrospinous Ligament Colpopexy

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**Abstract:** Transvaginal sacrospinous colpopexy is a surgical technique applied to suspend the vaginal vault from the sacrospinous ligament to prevent vaginal vault prolapse. We herein present our experience in applying this technique in twenty women with either marked uterovaginal prolapsed or vault prolapsed. All patients were followed up over a six month period. We met with no intraoperative complications during the procedure. Postoperative complications such as fever (4.8%), urinary tract infections (23.9%), lower back and gluteal pain (14.3%) and urinary retention (14.3%) were recorded. None of our patients returned with recurrence of prolapsed during the flow up period of six months. Sacrospinous colpopexy is a simple, effective and safe technique that can be performed either by itself or as an adjunct to vaginal hysterectomy

**Keywords:** sacrospinous ligament, uterovaginal prolapse, vault, colpopexy.

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## 1. INTRODUCTION

The incidence of uterovaginal prolapsed is on the increase in India. Catastrophes following childbirth, manual labour in the puerperium and nutritional deficiencies, and non-spaced multiparity are the most common causes of the condition. (1).

A number of interventional surgical techniques have been used to correct uterovaginal proplase, but till recently no one technique has been quite satisfactory in preserving sexual function. In recent years the suspension of the vaginal vault to the sacrospinous ligament has gained increasing acceptance. Though the procedure was initially developed for therapeutic purposes only, as a means of treating patients of post-hysterectomy vaginal vault prolapsed, it is now being used as a prophylactic surgical intervention during vaginal hysterectomy in patients with advanced uterovaginal prolapsed.

Vaginal vault prolapsed is a rare but tragic complication that may occur after hyseterectomy, with incidence ranging from 0.2% to 43% (2) (3). Other studies report an incidence of below 5%. (4)

In this series we did a vaginal vault fixation to sacrospinous ligament during vaginal hysterectomy in cases of advanced uterovagianl prolapses and in cases of vault prolapse.

## 2. MATERIALS & METHODS

Transvaginal fixation of vagina was performed on twenty one patients in the Obstetrics & Gynaecology wars at the Yenepoya Medical College, Mangalore during a two year period.

The inclusion criteria for cases was

1. Grade III uterovaginal prolapse
2. Procidentia
3. Vault prolapsed
4. Prolapse with decubitus ulcer (after treatment)

The exclusion criteria were:

1. Grade I & II uterovaginal prolapse
2. Malignancy

Patients were thoroughly clinically assessed and were deemed 'fit for' before being posted for surgery. The degree of prolapsed, Stage 0 to Stage IV was measured using the 'Approved pelvic organ prolapse qualification' (PDPQ) system. Epidural or low spinal anaesthesia is used as it often relieves the extra load on circulation. Following surgery all patients were assessed and reviewed at regular intervals, one week, one month and six months.

### 3. RESULTS

The mean age of the patients was 51.4, with 55.3% of them being in the age range of 55 to 64 years. (Table 1). The maximum number of patents with mass per vagina with parity (para 2 or para 3) was 28.5%. (Table 2).

**Table 1: Age-wise distribution of the 21 cases**

AGE	NUMBER	PERCENTAGE
35-44	4	19.1
45-54	3	14.3
55-64	11	52.3
65-75	3	14.3

**Table 2: Duration of mass per vagina**

DURATION (YRS)	NUMBER OF CASES	PERCENTAGE
< 1	2	9.6
1-4	7	33.3
5-9	5	23.8
10-30	7	33.3

**Table 3: Degree of prolapse in study group**

Degree of prolapse	Number of cases	Percentage
III degree UV	10	47.6
Procedentia	6	28.5
Vault prolapse	5	23.9

**Table 4: Post-operative complications**

COMPLICATIONS	NUMBER OF CASES	PERCENTAGE
Nil	9	42.7
Fever	1	4.8
UTI	5	23.9
Gluteal pain	3	14.3
Urinary retention	3	14.3

**Table 5: Comparison of complications with other studies**

COMPLICATION	THIS SERIES	CRUSHANK	DALAL et al
Fever	4.8%	8%	14%
UTI	23.9%	6%	11%
Gluteal pain	14.3%	—	—
Urinary retention	3%	—	3%
Stress incontinence	—	4.5%	—
Wound infection	—	—	3%

**Table 6: Degree / type of prolapse of our series compared to other studies**

DEGREE	OUR SERIES	MARCUS & MARCUS	DALAL et al
III degree UV prolapse	47.6%	18%	94.2%
Procedentia	28.5%	9.4%	—
Vault prolapse	23.9%	62.5%	5.8%

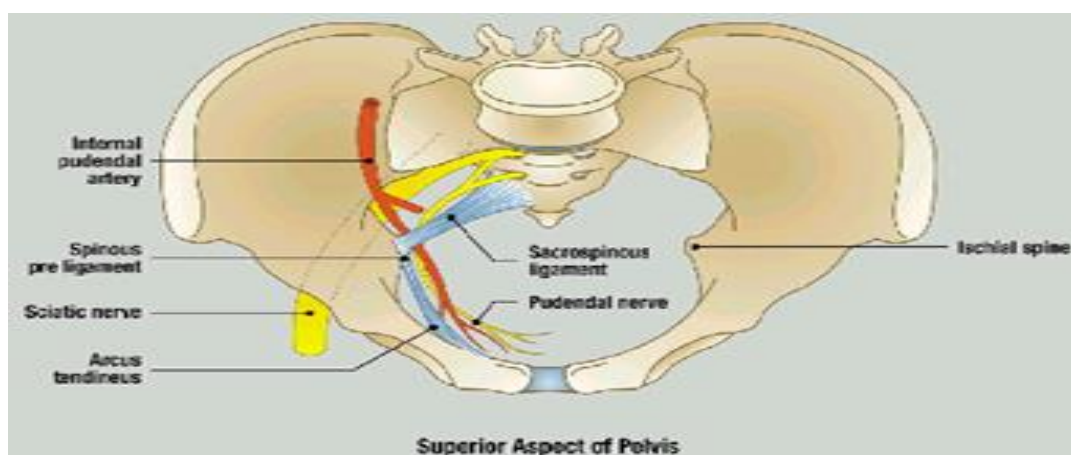
**Table 7: Comparison of associated procedures done along with sacrospinous colpopexy**

ALONG WITH SSCP	OUR SERIES	MORLEY	CRUSHANK
Anterior colporrhaphy	33.3%	7%	14.6%
Posterior colporrhaphy	—	30%	14.6%
Combined colporrhaphy	61.9%	30%	37.3%
None	4.8%	33%	37.3%

47.6% of the series in this study had Grade III uterovaginal prolapse, with 28.5% procedentia and 23.9% with vault prolapse. (Table 3). The mean operating time ranged from 1.5 to 3.15 hours. The mean blood loss during the procedure ranged between 100 to 400 ml. Hospital stay duration was between 7 to 10 days.

Analysing postoperative complications, while 9 patients among the 21 had an uneventful post-operative period, 6 developed febrile illnesses, with 5 among them diagnosed as contracting urinary tract infection. 1 patient (one) had pyrexia of unknown origin. 3 patients developed low back / gluteal pain which resolved either by itself or by administration of analgesics. 3 patients found difficulty is passing urine following removal of catheter (on third postoperative day) had to be re-catheterised for 48 hours more. (Table 4). In this series of surgeries we used only a conventional needle holder a ligature carrier and prolene as suture material.

#### 4. DISCUSSION



**Fig.1: Anatomy of the sacrospinous ligament**

Anatomically, the sacrospinous ligament is a thin triangular ligament attached through its broad base to the lateral margin of sacrum and coccyx. Its apex is attached to the spine of the ischium. It is considered to be a degenerate part of the coccygeus.

It has been estimated that 0.5% of hysterectomised patients acquire prolapse of vaginal vault (7). The refinement of surgical interventions and techniques, based on experience and observations, led to the procedure of fixation of vaginal vault to sacrospinous ligament (sacrospinous colpopexy) as one of the safer, more reliable and least complex techniques. Of late the procedure is additionally applied as a prophylactic, instead of merely therapeutic or corrective.

Comparing the results of this study with that of other shows that, our percentage of cent per cent success rate compares very favourably: while others report success rate of 94%, Morley and De Lancy record 90%, Cruickshank reports a rate of 98%. (5, 6). A comparison of nature of complications and their percentages ensuing from surgical interventions is presented here under Table 5. Corrective interventional surgery for type / degree / stage of prolapse done by us compared to other studies (8, 9) is presented under Table 6 (78)

Moreover, transvaginal approaches allow for a simultaneous correction or attention to other defects such as cystocele, rectocele or even enterocele. Comparing the corrective interventions done in association with sacrospinous colpopexy by us with that of others is presented under Table 7 (p 79)

While some reports suggest complications due to In this series of surgeries we used only a conventional needle holder as ligature carrier, instead of the recommended, and prolene as suture material, with reduction in rate of complications.

## 5. CONCLUSIONS

The results from our series show that sacrospinous colpopexy is an easy and efficacious procedure for correction of vaginal vault prolapse and as prophylactic adjuvant in uterovaginal prolapse. The high success percentage, coupled with retention of sexual functions, makes sacrospinous ligament colpopexy an effective and safe procedure.

## REFERENCES

- [1] Dalal Malti, Verma Ragini N, Shah Tejal S, Garg Heena C., Sacrospinous colpopexy for vault suspension during vaginal hysterectomy with repair for genital prolapsed, *J. ObstetGynaecol India* (2006) 56: 247-49
- [2] Cruickshank SH, Cox DW., Sacrospinous ligament fixation at time of transvaginal hysterectomy, *Am J Obstet Gynecol* (1990) 162: 1611-19
- [3] Scott RJ., Prophylactic sacrospinous fixation discouraged. *Am. J. Obstet Gynecol* (1992) 166: 1022
- [4] Hewson AD., Transvaginal sacrospinous colpopexy for posthysterectomy vault prolapse, *Aus NZ J Obstet Gynecol* (1998) 38: 318-24
- [5] Lantzch T, Goepel C, Wolters M, Koelbl H, Methfessel HD, Sacrospinous ligament fixation for vaginal vault prolapsed, *Arch. Obstet Gynecol* (2001) 265: 21-25
- [6] Morley GN, DE Lancy JO, Sacrospinous ligament fixation for eversion of vagina. *Am J Obstet Gynecol* (1988) 158: 872-79
- [7] Nicols DH, Sacrospinous fixation for massive eversion of vagina, *Am J Obstet Gynecol* (1982) 142: 901-04
- [8] Marcus PC, Mark C Slack, Transvaginal sacrospinous colpopexy for vault and marked uterovaginal prolapsed., *Br J Obstet Gynecol* (1994) 101: 536-548.