

## CERVICOPEXY BY PURANDARE'S METHOD AND A MODIFIED TECHNIQUE

(A prospective study on 22 cases)

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### *Introduction*

Operative treatment of genital prolapse in nulliparous and young women who have not completed their families is still a problem. Congenital weakness of the musculofascial structures is one of the significant causes of recurrence in them. Diversity of opinion exists as to the correct surgical approach and we have yet to find an ideal one. Fothergill's operation, Manchester type of operation without amputation of cervix and cilliam's have long been tried. During the late fifties, two abdominal operations have been devised for this group of cases—Cervicopexy by Purandare in 1956 and Sling operation by Shirodkar in 1958. But these have not been uniformly accepted and tried all over the country by all surgeons.

This study comprises of 22 cases of cervicopexy. Ten cases were done on the principle of Purandare's method (Group A) and 12 by a modified technique

(Group B) devised by us. A comparative analysis between the two methods has been made and evaluated in this study.

### *Material and Methods*

Five of these operations were done in M.R. Bangur Hospital, Calcutta, from December, 1974 to May, 1976 and the rest in Eden Hospital, Calcutta, since August, 1977. Cases were selected for the individual method at random irrespective of age, parity or extent of uterine descent.

### *Surgical Technique: Group A (10 cases)*

A tranverse incision was made about 2" above symphysis pubis. A fascial strip of rectus sheath (½" width) was fashioned, separated from the underlying muscles and divided in the midline, remaining attached laterally. The abdomen was opened, uterus lifted up and the peritoneum of the uterovesical pouch incised. Working with the index finger in between the layers of broad ligament, the lateral abdominal wall was reached near the internal inguinal ring. A curved artery forceps was guided over the finger, the fascia transversalis pierced through, the fascial strip was caught and brought in front of raw isthmus. Similar steps were

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followed on the opposite side. The two strips were transfixed to the uterine isthmus anteriorly with 3 silk sutures. The peritoneum of the uterovesical pouch was closed.

#### Modified Technique: Group B (12 cases)

Instead of one, two strips were prepared on each side (Fig. 2) and taken inside extraperitoneally as before. One pair was fixed with uterine isthmus and one each of the other pair with round ligament near its uterine attachment (Fig. 3).

Round ligaments were plicated in 5 cases of Group A and in all the cases of Group B. Advancement of bladder peritoneum was not done in any case.

#### Associated Operation

In Group B, colpoperineorrhaphy was done in 1, dye test in 3 and removal of broad ligament cyst in 1.

#### Results

Age: Group A cases were younger,

#### Parity

No significant difference in parity between 2 groups. Excluding nulliparas, the average parity was 1.44 as compared to 2.7 of Purandare *et al* (1966) and 1.8 of Parmar *et al* (1967).

**Marital Status:** Nine patients were unmarried and 13 married.

#### Causative Factors

Of 13 nulliparas, 6 had history of fall following which the prolapse was noticed, while one had it while dancing. This is the usual history given by the patients of congenital prolapse. Two had chronic constipation. Five parous women developed prolapse following first and 2 following second childbirth. Two had forceps delivery.

#### Clinical Features

All the cases complained of something coming down, the duration varying from 9 months to 6 years. Other symptoms and relief after operation are shown in Table I. On examination second degree

TABLE I  
Symptoms and Relief After Operation

Symptoms	Group—A		Group—B	
	Pt. suffering	Pt. cured	Pt. suffering	Pt. cured
Prolapse	10	8	12	12
Leucorrhoea	3	2	5	4
Backache	4	3	4	4
Dysuria	1	1	2	1
Dysmenorrhoea	2	1	2	2
Primary infertility	-	-	2	Nil
Secondary	2	2	2	1

the mean age being 19.6 compared to 22 years of Group B. Overall, mean age was 20.6 as compared to 25 and 26 in the series of Purandare *et al* (1966) and Parmar *et al* (1967) respectively.

(Malpas, 1958) uterine prolapse was found in the majority (Table II), the cervix lying outside the introitus. Cervical elongation (1½"-2") was more in Group A. In one unmarried girl of



TABLE II  
Clinical Findings

Gr.	No. of cases	Uterine 1st Deg	Descent 2nd Deg.	Cystocele	Rectocele	Elongated Cx	Hypertrophied Cx
A	10	-	10	2	-	6 (60%)	-
B	12	2	10	2	1	3 (25%)	3 (25%)
Total	22	2	20	4	1	9 41%	3 (13.66%)

Group A, the length of cervix was 2½" (Fig. 1).

Previous Operations

Two cases of Group A had P.F.R. with plication of Mackenrodt's ligaments and 1 had amputation of cervix within 6 months before coming to us. 1 case of Group B had P.F.R. and 1 had Fothergill's operation 4 months and 10 months before.

Post Operative Period

Was uneventful except stitch abscess in 3 cases, temperature in 2 and gastroenteritis in 1.

Follow up

Table III shows that the period of follow up was more in Group A. The first follow up examination was done after 6 weeks

and then every 3 months. Table VII shows the position of uterus and cervix at follow up. It was interesting to note that mild or moderate cystocele was corrected in 4 cases and the cervix became smaller in those with hypertrophy and elongation.

Pregnancy

Two conceptions occurred in each group. One of Group B ended in abortion at 12 weeks. Three had term deliveries by LUCS—1 elective and 2 in early labour. The fascial strips were found well fixed (Fig. 4). It was interesting to find that the upper strips were thick and hypertrophied in a case of Group B (Fig. 5). The incision on lower segment was made carefully above the line of fascial attachment. There was no adhesion or difficulty during operation as

TABLE III  
Duration of Follow-up

Gr.	No. of cases	3-6 mth.	7 mth-1 yr	1-2 yr	2-3 yr	3-4 yr	4-5 yr
A	10	-	2	2	1	2	3
B	12	4	2	6	-	-	-

TABLE IV  
Position of Uterus and Cervix

No. of cases	Uterus			Cervix			
	AV	Mid	RV	At I.S.*	Below I.S.	Above	
A	10	1 (10%)	4 (40%)	5 (50%)	5 (50%)	3 (30%)	2 (20%)
B	12	3 (25%)	7 (58.33%)	2 (16.67%)	6 (50%)	2 (16.67%)	4 (25%)

\* I.S.—Ischial Spine.

experienced in few cases by others (Purandare *et al*, 1966; Baxi, 1969). Follow up after 6 weeks revealed no uterine descent.

#### Recurrence

Table V shows 2 recurrences in Group

those who conceive ended in abortion or premature labour, apart from cervical tear, dystocia, obstructed labour and P.P.H. (Jeffcoate, 1967).

The views of Hunter (1957) and Leonard (quoted by Purandare *et al*, 1966) are similar. Many would not agree

TABLE V  
Results at Follow-up in Different Series

Authors	No. of cases followed up	Conception	Vaginal delivery	LUCS	Recurrence
Purandare <i>et al</i> (1966)	21			2	*1 (6.6%)
Parmar <i>et al</i> (1967)	51	14	11	1	7 (13.7%)
Tamaskar (1972)	20	7	6	-	2 (10%)
Domadia & Lele (1973)	31	7	4	2	-
Sheth <i>et al</i> (1975)	15	-	-	-	1 (6.6%)
Present Series (1979)	22	4	-	3	2 (9.09%)
Group A	10	2	-	2	2 (20%)
Group B	12	2	-	1	Nil

\*Among 15 vaginal delivery.

A but none in Group B. In 1 case, unfortunately the first case of our series prolapse recurred after 3 months. Before cervicopexy she had Manchester operation. Gross enterocele was noted which perhaps was present before and got exaggerated after cervicopexy. Amputation of cervix had to be done with repair of enterocele. In another, first degree descent was noted after 6 months.

#### Discussion

The problem with these cases is, in most of them, child bearing function is to be preserved. Secondly, there is elongation and hypertrophy of cervix in a good number (Table II) but amputation is to be avoided, because 75-90% fail to conceive after Fothergill's operation and 20-25% of

to it and Purandare *et al* (1966) achieved good conception rate following Fothergill's operation. Tamaskar (1972) among others did modified Fothergill's (without amputation of cervix) and observed that its failure made her try cervicopexy. We have also tried it before cervicopexy as stated earlier. Even there was recurrence after Fothergill's operation in 1 and amputation for elongated cervix in 1. Parmar *et al* (1967) observed that cervicopexy is a useful surgical procedure, because it effectively cures prolapse without affecting subsequent fertility and therefore has a definite advantage over Manchester operation. Tamaskar (1972) opined that cervicopexy should be given extensive trial in nulliparous prolapse.

Some authors (Purandare *et al*, 1966;



Sheth *et al.*, 1975) do not recommend cervicopexy in cases with hypertrophy or elongation of cervix or where the utero-cervical length is more than 3½"-4". We have done it irrespective of these factors and 1 case with 5½" of uterocervical length is still doing well (Fig. 1).

We achieved 4 pregnancies among 13 married women, of whom 3 had term deliveries by caesarean section. Purandare *et al.* (1966) allowed vaginal delivery and their section rate was not high. Others (Tamasker, 1972; Domadia ana Lele, 1973) have allowed vaginal delivery but this was followed by recurrence in some cases. Domadia and Lele (1973) recorded obstructed labour in 2 cases requiring section (Table V). Since vaginal delivery is a potent cause of recurrence, we have done section in all the cases.

Prolapse in nulliparous women or following first child birth suggest congenital weakness of the supporting structures and some recurrence will be there, however meticulous one may be, in repairing the anatomical supports. Therein lies the advantage of fascial sling. Another advantage of abdominal operation is that one can have a look at the pelvic organs and carry on tubal patency tests under direct vision (Sheth *et al.*, 1975). We have done it in 3 cases.

Because of early recurrence in 20% of Group A we thought of the modified method using 2 strips on either side and did it in 12 cases. There has been no recurrence in this group as yet, although the period of follow up is not long enough.

#### Summary

(1) The study comprises of 22 cases of cervicopexy in young women with mostly second degree prolapse deserving preservation of child bearing function. Ten cases were done by Purandare's method

and 12 by a modified technique using two fascial strips on either side.

(2) The modified method kept the uterus AV or in mid position in the majority.

(3) Four conceptions were achieved among 13 married women of whom 3 had term delivery by caesarean section. While there has been 20% recurrence in Purandare's method, there was none after the modified technique.

(4) A comparative analysis had been made between the 2 groups and the results compared and discussed with reference to the relevant literature.

#### Conclusion

Cervicopexy is worth trying in young women deserving preservation of child bearing function. Modified technique is expected to offer less recurrence. Caesarean section is preferable because of the inherent tissue weakness in this group which will be one more strain in vaginal delivery.

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*See Figs. on Art Paper II-III*