Shirodkar's Extended Manchester Repair: A Conservative Vaginal Surgery for Genital Prolapse in Young Women and Reinforcement of Weak Uterosacral Ligaments with Merselene Tape: Retrospective and Prospective Study

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Research Article

Abstract: The aim of this study was to evaluate the results of Shirodkar Extended Manchester Repair operation for uterine prolapse in young women interested in retaining future childbearing and menstrual function. **Materials and Methods:** 30 patients with II or III degree utero-vaginal prolapse with or without cystoenterorectocoele and with normal uterocervical length (i.e. no cervical elongation) in child-bearing age group (i.e. less than 35 years) interested in preserving future fertility or menstrual function were operated and followed-up. In patients with weak uterosacral ligament, reinforcement with merselene tape was done. **Results:** In this study, 79% of the patients were below the age of 30 years. About 33.33% of the patients were interested in retaining child-bearing and menstrual functions, while 66.66% of the cases were interested in retaining only menstrual function. 28 patients could be followed-up. The anatomical results were good. There was no recurrence of prolapse after pregnancy or labour. The operation did not interfere with normal vaginal delivery. **Conclusion:** Shirodkar's Extended Manchester Repair has a definite place in the treatment of genital prolapse especially during the reproductive age, where child-bearing function has to be preserved.

Keywords: Uterosacral ligaments, Merselene tape, Genital prolapse, Anteriorcolporrhaphy, Uterocervical length

Introduction

Genital prolapse is one of the major complaints encountered in our gynaecological practice. Various conservative and operative modes of treatment have been devised to cure the condition. In fact, no subject has evoked more discussion, debates and disagreements in Gynaecology as that of conservative management of prolapse in patients who are interested in retaining fertility and child bearing.Today most of the gynecologists are employing Fothergill-Manchester operation or abdominal sling operation to correct prolapse uterus in young women. In Fothergill-Manchester Repair, amputation of cervix, advancement of Mackenrodt's ligaments to the anterior aspect of what remains of the cervix, an anterior colporrphaphy and perineorhhapy is done. This time honoured technique has various shortcomings i.e. cervical stenosis, infertility, cervical incompetence, cervical dystocia during labour, dyspareunia and recurrence of prolapse after pregnancy or otherwise was also reported to the extent of 20-25% (Shaw 1933).An ideal conservative method should preserve menstruation, restore the fertility and should not interfere with labour and of course be technically easy at the same time. In India, prolapse in young women is far more common than western countries. So, a serious thought was given by Indian Gynaecologists for devising new conservative surgical technique when the disadvantages of Fothergill-Manchester operation especially pertaining to future child bearing were realized. Dr. Shirodkar in 1946 came up with the novel approach of utilizing uterosacral ligament for the repair of prolapse without amputation of cervix and concomittententerocoele repair which give a good success rate. This technique known as Shirodkar Extended Manchester Repair is a simple conservative vaginal surgical procedure for genital prolapse in young women with II/III degree uterine prolapse with/without cyslocoele or rectocoele, interested in child bearing or preserving menstruation with no cervical elongation and good uterosacral ligament strength. It is also less invasive than abdominal sling operation. This study was conducted to know the various aspects of the operation and its role in the treatment of genital prolapse in young women. It was also conducted so as to get acquainted with the operative technique and thus to increase its efficacy. The short term and long term complications were also noted.

Material and Methods

This was a retrospective and prospective study conducted in the Department of OBGY, Dr. V.M.G.M.C. Solapur and S.C.S.M.S.R. Solapur over a period of 10 year. The study consisted of 30 patients with genital prolapse in child-bearing age group admitted and operated at S.C.S.M.S.R. Solapur.The following factors were taken into consideration in choosing a particular patient for correction of her prolapse in the present series.

1. Age of patient (i.e. less than 35 years)
2. Degree of prolapse (II or III degree prolapse)
3. No cervical elongation (i.e. Normal Utero Cervical Length)
4. Strength of utero sacral and cardinal ligaments
5. Desirability of preserving future fertility or menstrual function

On admission, detailed history of every patient was obtained. A thorough clinical examination was done.Routine laboratory and Radiological Investigation were carried out. Surgery was performed in post-menstrual period. The operative technique, the complications and finally follow-up completed the study.

Operative Procedure

1. Circular incision is taken over the cervix and vagina is reflected.
2. Bladder is pushed up anteriorly.
3. The pouch of Douglas is opened and uterosacral ligaments are dissected along with the peritoneum on either side. Thus, strips of uterosacral ligaments are prepared.
4. Advancement of post-peritoneum is done.
5. Strips of uterosacral ligaments are anchored to cervix anteriorly at the level of isthmus taking care to push the cervix high up and posteriority in order to maintain the anteversion of uterus.
6. Anterior colporhhaphy and posterior colpoperineorrhaphy is done.

Observation and Result

In this study, 79% of the patients were between 21 to 30 years of age. The youngest patient was 22 years old and the eldest was 35 years old.

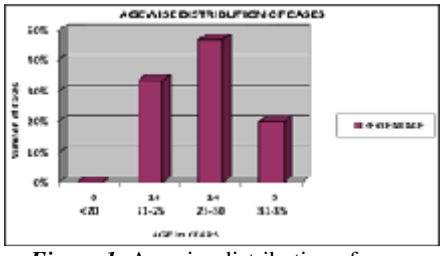

Figure 1: Agewise distribution of cases

13% of all cases of prolapse occur in Primiparas and more than half by second child.

Table 1: Parity wise distribution of cases

Parity	No. of cases	Percentage
Nulliparous	1	3.33
One	4	13.33
Two	12	40.00
Three	11	36.66
Four/more	2	6.66

Out of 30 patients, 66% patients had home delivery.

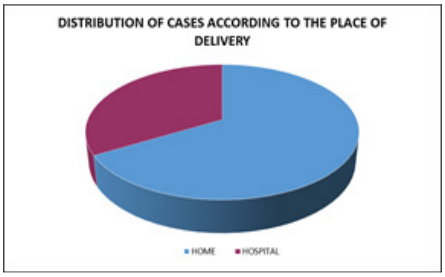

Figure 2: Distribution of cases according to the place of delivery

Maximum cases developed prolapse before 25 years (i.e. 46.66).

Table 2: Distribution of the cases according to the age at which prolapse developed

Age in years	No. of cases	Percentage
<=20	0	-
21-25	14	46.66%
26-30	12	40.00%
31-35	4	13.33%

In this study, about 54% of the patients developed prolapse within 3 years of first vaginal delivery.

Table 3: Duration between the first delivery and occurrence of prolapse

Interval in years	No. of cases	Percentage
Within 1 year	3	10%
1 year	1	3.33%
2 year	5	16.66%
3 year	6	20.00%
<= 4 year	14	46.66%

Table 4: Symptomatology

Presenting Symptoms	No of cases	Percentage
1) Something coming out of vagina	30	100%
2) Leukorrhea	12	40%
3) Backache	18	60%
4) Difficulty in micturition	9	30%
5) Urinary retention	1	3.33%

All the 30 cases came with chief complaint of something coming out of vagina.Not a single case of 1st degree uterine descent was included in our study as being asymptomatic condition and can be managed by non-surgical conservative management. Majority of the patients i.e. 73.33% had third degree uterine descent.

Table 5: Uterine Descent

Degree of Prolapse	No of cases	Percentage
II^0	8	26.66%
III^0	22	73.33%

75% of the patients had Cystoenterorectocoele. 20% had cystocoele and 3% had only Cystoenterocoele .Out of 30 cases, 10 cases had already undergone tubal ligation in the past and hence were interested only in retaining their menstrual function. Out of remaining 20 cases, 10 cases were para 2 or less who were interested in retaining their child bearing function. One was a nulliparous case. Remaining 10 cases out of 20 patients underwent Tubal ligation at the time of Shirodkar Extended Manchester Repair.

Table 6: Tubal Ligation

	Tubal Ligation	
	Done	**Not done**
Nullipara	-	1
Para 1	-	4
Para 2	5	5
Para 3	5	8
Para 4		2
	10	**20**

Table 7: Sterilization Method

Sterilization	**No of cases**
Vaginal sterilization	9
Abdominal sterilization	1

Thus, about 33.33% of the cases were interested in retaining both child bearing and menstrual functions, while 66.66% of the cases were interested in retaining only menstrual function. In 86% of the cases, anterior colporrhaphy and posterior colpoperinerrhaphy was done as a part of treatment of associated vaginal wall prolapse.Mersilene tape fixation at the site of anchoring of the uterosacral ligament to the anterior surface cervix was done in 2 cases with weak uterosacral ligaments to prevent failure of the operative procedure. Abdominal tubal ligation was done in one case where it was difficult to trace the fallopian tubes for sterilization per vaginally after opening the pouch of Douglas.

Table 8: Incidence of Post-Operative complications

Sr.No.	**Complications**	**No of cases**	**Percentage**
1	Pain	4	13%
2	Discharge PV	4	13%

13% of the cases had pain and discharge per vaginally. Intra-op, there was no complication.

Post-operative Follow-up

Out of 30 patients, 13 patients could be followed-up for more than 1 year. In them, one patient had come for follow-up after 9 years. In all these patients, the cervix was high up. 10 patients could be followed-up up to 5 months and 3 patients up to 3 months. 2 patients were recently operated and after six weeks had no recurrence. Two patients were completely lost-up for follow-up.In only one patient, there was recurrence. It was probably because the patient had cervical elongation. One patient was nulligravida. After Shirodkar repair, she had one full-term normal delivery and one caesarean section. There was no prolapse in this patient even after pregnancy. One patient who had come for follow-up after 1½ year gave history of blood-stained discharge. On per-speculum examination, there was granulation tissue over the cervix and presence of black silk in the exposed granulation tissue.

Discussion

In this study, 79% of the patients were less than 30 years of age consistent with other studies. Prolapse at a young age is because of congenital weakness of supports for genital organs which may in turn be due to malnutrition. As prolapse was seen at a very young age in these series, it suggested that all these patients were strongly interested in retaining their child-bearing and / or menstrual function. In our study, 58% of patients did not have more than two deliveries. Thus, it is the operation of choice when obstetric function is still to be preserved. Majority of the patients (i.e. 73.33%) had III degree uterine descent. Thus, this operation can be done even in patients with III degree descent. Various concurrent surgical procedures were carried out at the time of Shirodkar Extended Manchester Repair. Cystocoele repair in 4 patients, cystoenterorectocele repair in 22 patients. In two patients in whom the uterosacral ligament was weak, strengthening of the ligaments by Merselene tape was done. Vaginal tubal ligation was done in 9 patients and abdominal tubal ligation in one patient. There were no intra-operative complications. In the post-operative complications, four patients had pain and serous discharge per vaginuml. In these patients, betadinepessary was given. In our study, out of 30 patients, 28 patients came for follow-up. In all of them, the cervix was high up and facing upwards and backwards on pre-speculum examination except one case who had second degree uterine descent. This was due to wrong selection of case. The patient had cervical elongation. Thus one of the most important criteria for selection of cases in this series was that there should be no cervical elongation. Very often one is confronted with a young patient with II or III degree prolapse with normal uterocervical length and marked or moderate cystocoele and rectoenterocoele. Amputation is baseless with normal uterocervicallength; hence choice is Shirodkar's operation of advancement of uterosacral ligament. In Shirodkar Extended Manchester repair, as no amputation of cervix is done, complications like abortion, premature labour, cervical stenosis, infertility due to loss of cervical mucus, cervical dystocia during labour are not seen. Here, instead of Mackenrodt's ligament, uterosacral ligaments with its peritoneal attachment which forms a strong band of tissue, are utilized as slings. Hence, the occurrence of prolapse is1

less.As it is a conservative vaginal procedure, it has advantages over the abdominal sling operations like

1. It permits restoration of a functional vagina with a normal horizontally inclined upper vaginal axis atop the levator plate, thereby decreasing the chances of recurrence of vault eversion.
2. In contrast to abdominal procedures, it offers a convenient opportunity to correct cystocele, rectocele or enterocelesimulationeously through the same operative exposure.
3. It is a shorter procedure than the abdominal operation and requires less duration and depth of anesthesia.
4. Finally, post-operative ileus, intestinal obstruction, incisional pain and other hazards of trans abdominal surgeries are decreased.
5. Thus, this operation seems to have a definite place in the treatment of the genital prolapse especially during the reproductive age, where child-bearing function has to be preserved.

Summary and Conclusion

1. The anatomical and symptomatic success of the operation was good.
2. There was no recurrence of prolapse during pregnancy or following labour after the operation. This operation did not interfere with the dilation of the cervix during labour.
3. Thus, the results obtained, especially as far as uterine prolapse is concerned are very impressive. Thus, this operation is recommended in selected cases of genital prolapse in young women.

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