THOUGHTS ON SURGICAL CORRECTION OF UTERINE DESCENT DURING CHILDBEARING PERIOD

by

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The incidence of prolapse in young girls and nulliparae is fairly high in our country as compared to their counterparts in other countries. In addition, a large number of multigravadae with a prolapse also desire to preserve the childbearing function largely because of a high perinatal and infant mortality. The purpose of this presentation therefore is to do some rethinking and reevaluation of the available surgical methods with reference to the etiology of uterine descent during the childbearing period. It also emphasises a view that a judicious selection of cases is imperative to derive a maximum surgical benefit.

Supports of Uterus

Most anatomists and gynecologists agree that the direct supports of the uterus are the pelvic connective tissue and facia forming pubo-cervical, transverse cervical and uterosacral ligaments (Smout and Jacoby 1969; and Jeffcoate 1975). Majority also agree that the vagina and the pelvic diaphragm are only indirect supports as far as the uterus is concerned.

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That the uterosacral and cardinal ligaments are responsible for maintaining the uterus in mid-pelvic position (Shirodkar, 1967) is also borne out by the following facts:

1. During vaginal hysterectomy (without prolapse) the uterus descends down considerably from its original position only when the cardinal and utero-sacral ligaments are divided.

2. That in cases of nulliparous prolapse in young women or virgins, these ligamentous tissue is very poorly developed.

3. That tear of perineum and injury to urogenital and pelvic diaphragm (such as 3rd degree perineal tear) are not associated with uterine descent.

Prolapse essentially implies a failure of these main supports of uterus. That congenital weakness of the supporting structures is the most important single factor in causation of prolapse in a young patient is evidenced by:

(a) In a patient with nulliparous prolapse, the ligamentous supports of uterus are almost absent or very poorly developed—they manifest prolapse at a very young age either before childbirth or soon after a childbirth and in a few, even before marriage.

(b) Patients with congenital weakness of uterine supports also possess poorly developed musculo-ligamentous system

elsewhere. They are asthenic and of a fragile built.

(c) Prolapse in both nulliparous and multiparous patients during childbearing period has a strong familial tendency.

(d) Attempts to correct the prolapse in cases with congenital weakness of ligaments by utilising patient's own tissues (e.g. modified Manchester operation) results in a failure.

(e) We come across many grand multigravidae who do not have even slightest degree of prolapse inspite of labours conducted in ordinary circumstances. Those women who develop prolapse of uterus (as opposed to vaginal wall prolapse) following childbirth do have some degree of congenital weakness of ligaments, and the childbirth makes the prolapse manifest itself (Jeffcoate 1975). Thus the role of childbirth in etiology of prolapse should not be over estimated.

Material and Methods

During the past 10 years from 1972 to 1981, 750 cases of prolapse underwent a surgical correction at Nair Hospital. Of these, 150 cases belonged to childbearing age. Almost half the number of women with prolapse during childbearing period were undernourished (49.5%) and asthenic (see Photos 1 and 2). Thirty women out of these 150 cases were nulligravida and were labelled group I. Group II consisted of 120 women with prolapse who had history of one or more deliveries. The salient clinical features among these 150 patients are shown in Table I. The following factors were taken into consideration in choosing a particular surgical method for correction of her prolapse in the present series.

1. Etiology of prolapse and the strength of uterosacral and cardinal ligaments.
2. The utero-cervical length.
3. Desirability of preserving future fertility.
4. Condition of the cervix.
5. Experience of the surgeon.

Four surgical procedures were adopted in this series-namely (a) Abdominal Sling Operation. (b) Cervicopexy (Purandare *et al* 1966). (c) Modified Manchester Operation—so called advancement of uterosacral ligaments. (d) Manchester Operation.

(a) Abdominal Sling Operation (1960). This operation was selected for any degree of prolapse where the etiology was a congenital weakness of the ligamentous supports of the uterus. The use of nylon tape (not fascia lata as described originally by Shirodkar) for creating artificial ligaments works equally well. The procedure is not so simple and therefore demands some degree of dexerity and practice on the part of the operator. Thirteen cases of nulliparous and 43 cases

TABLE I

Clinical Features in 150 Women with Prolapse During Childbearing Period

No. of. cases	Degree of Prolapse						Past Obst. History		Cervico Uterine Length		
Total 150	I°	II°	III°	Cysto-coele	Recto-coele	Entero-coele	Nil	Abortions/upto FT delivery	3½"	3¾-4½"	4½"
Group I 30	0	7	23	5	0	3	20	10 (abor.)	15	15	0
Group II 120	0	50	70	92	54	4	0	120 (FTND)	29	81	10

of oligoparous women with third degree prolapse due to congenital weakness of ligamentous were corrected by this method (Table II).

(b) Cervicopexy: This operation is the operation of choice in cases of prolapse with only some degree of weakness of uterine ligaments, while the general build and development of musculo-fasial system was normal. This relatively simple operation makes use of strips of anterior rectus sheath of the patient's anterior abdominal wall to create a support for the cervix anteriorly. Eleven women in group I and 5 women in group II with third degree prolapse of uterus were corrected by this technique.

(c) Modified Manchester operation: This was preferred in those cases of prolapse where the uterine ligaments were fairly well developed and the prolapse was of first or second degree; the general health of the patient was good and cervix was healthy. Prolapse was corrected in 68 multigravida by this method as shown in Table II. The above described (three) operations were employed whenever childbearing was to be preserved.

unhealthy. In no case should the etiology of prolapse be the congenital weakness of the ligaments. This was the method of correction of prolapse among 10 multigravidae in our series.

Complications (Immediate or Late) Due to Operation

Abdominal Sling Operation: There were no complications in this small series of 56 cases except in 1 case, where the left external iliac vessels sustained some trauma which ended up in an embolectomy. The patient had an uneventful recovery.

Cervicopexy: There were no immediate or late complications due to operation. However, in 2 cases where caesarean section was required at a later date, the attachment of the strips to anterior cervix created a lot of difficulty in seperation of bladder and approach to the lower segment.

Modified Manchester Operation: Cervico-vaginal fistula resulted following this operation in 1 case which was operated during early part of the series. The patient delivered two successive babies through the same opening without any difficulty.

TABLE II

Method of Surgical Treatment in 151 Women with Prolapse During Childbearing Period

	No. of cases	Cervicopexy	Abdominal Sling Operation	Modified Manchester Operation	Manchester Operation
Group I	30	11	13	6	0
Group II	120	5	43	62	10
Total	150	16	56	68	10

(d) Manchester Operation: This was reserved for those who had completed childbearing or were willing for tube ligation, the utero-servical length was more than 4½" and that the cervix was

Manchester Operation: Fair degree of haemorrhage occurred during the operation in 2 cases which was easily controlled by ligating the cervical branch of uterine vessels.

Results (Table III)

TABLE III

Results of Different Surgical Techniques for Correction of Prolapse in the Present Series

Surgical Method and no of cases	No. of cases followed up from 3 mths to 6 yrs.	Recurrence of Prolapse		No. of Pregnancies
		Group I No. of cases	Group II No. of cases	
Abdominal Sling 56	56	0	0	19
Cervicopexy 16	13	6	0	7
Modified Manchester 68	48	6	2	20
Manchester 10	10	0	0	0

Particularly as regards the descent of uterus:

(a) All 56 patients operated by sling operation were followed up from 3 months to 6 years. There has been no case of recurrence of prolapse, 4 women in nulliparous group have conceived—2 had vaginal deliveries and 2 required caesarean section for obstetric indication. Fifteen other multigravidae also conceived and had uneventful vaginal deliveries. None of the patients had recurrence of prolapse following pregnancy or labour and the sling was found to be in normal situation post-partum.

(b) Out of 16 patients who had undergone cervicopexy, 13 have been followed up. Seven have conceived and prolapse has recurred during pregnancy or post-partum in 6 of them. Out of 7, 2 aborted—one at 5 months and other at 6th month; 3 others have gone to full term and had vaginal deliveries. In the remaining 3 the pregancy went to term but caeserean section had to be carried out for dystocia in 2 and foetal distress in 1.

(c) As seen in Table III, out of 68 cases, treated by modified Manchester technique 6 cases belonged to Group I series. These 6 nulliparous patients had third degree prolapse due to congenital weakness of the ligmentous. There was recurrence of prolapse in all 6 within 3 to 6 months of operation. All these were cases operated early in the series—when one did not adhere strictly to the criteria of selection of the type of operation. Out of remaining 62 cases, 42 were followed up for one to 8 years. Among them 20 have conceived and delivered normally per vaginum. Post-partum, 6 have developed early degree of descent of uterus.

(d) Among patients treated with Manchester Operation—there was no recurrence of prolapse. Post-operatively the cervix was scarred in 3 of them and anterior fornix was almost obliterated in 7 of them.

Conclusion

1. Prolapse during childbearing period forms 20% of all cases of prolapse.
2. Out of all cases of prolapse during childbearing period, 20% were cases of nulliparous prolapse.
3. Congenital weakness of the ligaments was the only cause of prolapse in nulliparous prolapse and played a most important etiological role in more than

50% of cases of prolapse in childbearing period.

4. Four methods of surgical correction of prolapse during childbearing period are available. However, a judicious selection of the method alone will bring about a successful and a sustained outcome in any given case.

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See Figs. on Art Paper I