

TRANS ABDOMINAL APPROACH FOR A CURE OF UTEROVAGINAL PROLAPSE

by

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Introduction

The treatment of uterovaginal prolapse has a long tradition. The development in the treatment of this condition has indeed been responsible for the recognition of gynaecological surgery as a speciality in its own right. The multiplicity in the operative techniques, the recurrence of the prolapse and complications seen during delivery or otherwise put one's mind in doubt as to the correct approach in the principles of technique desirable. However, it may be mentioned here that the Manchester operation has stood the test as long as sixty years or so in this modern competitive surgical field, in spite of all the drawbacks it has been carrying with it. Hence, adding one more operative technique, I suppose, will not be the last straw on the camel's back in the arena of gynaecological practice. The trans-abdominal approach for a cure of utero-vaginal prolapse is designed to cure at one sitting any major degree of complicated utero-vaginal prolapse associated with cystocele, enterocele, urethrocele of varying degrees, along with a cure of stress incontinence if it also is associated with it.

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Technique

A semilunar skin incision is made from one anterior superior iliac spine to the other along a line slightly above the lower abdominal crease. The skin and subcutaneous tissue are dissected up as far as possible to give enough space for intra-abdominal work. Strips of external oblique fasciae, half an inch in breadth, are dissected out from each side from the upper border of the external inguinal rings upto their muscular origin (Fig. 1). These expose the internal inguinal rings with the emerging inferior epigastric vessels. Now making a median incision through the rectus sheath and the rectii muscles and separating the parietal peritoneum from the space of Retzius upto the lateral pelvic walls, the lateral fornices of vagina, superior surface of the bladder with its neck and the white line of levatores ani muscles are brought into view. An assistant then puts his two fingers into the vagina and lifts up the lateral vaginal fornices on either side of the cervix to guide the operator when he puts the stitches on the vaginal wall. The bladder neck is defined with the help of a foleys catheter introduced before the commencement of the operation. Three stitches are put on either side of the vaginal wall on the guiding fingers with No. 2 silk at half an inch interval and mediolaterally upward;

the first one being at the level of the neck of the bladder and the last one after being passed through the medial-most part of the white line. These stitches are pulled up to see whether the vaginal vault is lifted up. When the assistant confirms this, these stitches are anchored to the reflected part of the inguinal ligament of either side (Fig 2).

The peritoneal cavity is now opened, the intestines packed, and the uterus is pulled out of the abdominal cavity with the help of uterus holding forceps and this is possible due to the laxity of pelvic supports. The peritoneum covering the posterior surface of the uterus at the level of internal os is incised for about half an inch transversely (Fig. 3).

A round ligament forceps is negotiated via this rent, extraperitoneally through the internal inguinal rings on either side, taking care of deep epigastric vessels which are kept medial to the forceps. Now, the strips of external oblique fasciae, already fashioned previously, are caught on each side by their ends with the round ligament forceps (Fig. 4). and brought down from either side to the posterior surface of the uterus, where they are crossed with equal tension at the level of the internal os and each is stitched with five stitches of No. 2 silk (stitches are placed one on the end and two on upper and two on lower margin of the fasciae). This will maintain the uterus in anteverted midposition. The raw area is then peritonised.

In the next stage the pouch of Douglas is repaired more or less as in the Moschowitz technique (Fig. 5). A purse string sutures of No. 1 chromic catgut is applied starting from the

bottom of the pouch of Douglas incorporating the anterior rectal and posterior vaginal walls and working up gradually till the last stitch reaches at the level of the internal os. If the pouch is very deep and the enterocele or rectocele is of major degree, then the peritoneum over the pouch of Douglas is opened transversely cutting through both the utero-sacral ligaments and the rectovaginal septum separated as far down as possible. The purse string sutures are then applied as above. These purse string sutures will obliterate the pouch of Douglas and also form a firm adhesion between the anterior rectal and posterior vaginal walls. Lastly, the uterosacral ligaments are shortened and stitched back to their original positions with the same catgut if they have been cut. This will produce an additional support for anteversion. After this repair the area is peritonised.

Lastly, the repair of the infra-umbilical part of abdominal wall to strengthen the tone of rectus muscles is done. After having closed the parietal peritoneum, the posterior layer of rectus sheath is split transversely into half inch flaps up to the hiatus semilunaris and then they are stitched alternately, super-imposing each other. The lower part being devoid of the sheath the internal oblique muscles are brought together and stitched with interrupted chromic No. 2 catgut sutures. A similar flap splitting technique is adopted with the anterior rectus sheath through out except that the flaps here are one inch in breadth.

The bilateral rents in the external oblique are now closed, more or less as in repair of an indirect inguinal

hernia. This will avoid any herniation of intra-abdominal structures.

Anatomical explanation justifying this operation

The levatores ani is invested by a fibrous sheath which is condensed around the point where the vagina passes through the pelvic floor. This condensation of the vaginal sheath is firmly fixed to, and continuous with, the upper layer of the muscle sheath, fusing ultimately with the aponeurotic origin of iliococcygeus and this layer is termed the endopelvic fascia. This fibrous sheath of the vagina and bladder undergo hypertrophy in case of utero-vaginal prolapse and in anterior extra-peritoneal vaginopexy, the advantage of this hypertrophied vaginal sheath is taken. By doing this high vaginopexy, cystocele and urethrocele are corrected with the restoration of normal urethro-vesical angle.

The external oblique muscles are least strained and damaged with pregnancy and parturition. It is one of the strongest abdominal muscles with a strong aponeurotic sheath. The use of the external oblique muscles for posterior cervicopexy in fact has dual purpose. They act as ligamentous supports for the atrophied and stretched uterosacral ligaments, thus maintaining the uterus in normal position and they also supplement the function of the damaged levator ani as one of the main supports of pelvic organs.

The cure of rectocele in all my cases is brought about by the synergistic action of the external oblique muscles and the undamaged puborectal is part of levator ani whose ad-

vantage is taken by the rectovaginal fusion operation.

Figs. 6 and 7 show the patient before and two months after the operation. There was no evidence of prolapse on straining. (Fig. 8).

Observations

Between November 1964 to November 1967, 18 cases of uterovaginal prolapse have been operated upon by this technique. Table I shows the relations of the uterovaginal prolapse with age, parity, degree of descent, associated cystocele and rectocele and the number of cases in each group. The youngest patient in this series was 20 years and the oldest was 32 years. There were 2 cases of first degree prolapse, 6 cases with second degree and the rest, i.e. 10 cases, with third degree of uterovaginal prolapse. There were 2 cases without any cystocele or rectocele, 5 cases with rectocele only and the rest were associated with both cystocele and rectocele. One case had developed third degree prolapse one year after an abortion at 4 months. There were 8 cases of prolapse following the first delivery, 6 cases following 2 deliveries, 2 cases following 3 deliveries and one case after 5 deliveries. There were three recurrences following different operative techniques, as mentioned in the "remarks" column of Table I. These cases were treated again by the present technique and were cured. Two cases have been observed for four years, 4 for 3½ years, 8 for 2½ years, 3 for 1½ years and the last one for 1 year. Six of these cases became pregnant. Three of these delivered more than one year and ten months ago, two delivered about one year and

TABLE I
Showing age, parity and degree of prolapse with associated cystocele and rectocele

S. No.	Age	Parity	Degree prolapse	Associated		No. of cases	Remarks.
				Cystocele	Rectocele		
1	20	Nil abortion at 4 mths	3rd	++	+	1	Delivered 1 yr. 10 mths. back and she is well now without any recurrence.
2	22	2	1st	—	—	1	
3	22	1	2nd	—	+	1	
4	23	1	2nd	+	+	1	Delivered 1 yr. 7 months back & she is well without any recurrence.
5	23	2	2nd	++	+	1	
6	25	1	1st	—	—	1	
7	26	1	2nd	+	+	2	
8	27	1	2nd	—	++	1	Had a recurrence 2 months after Manchester operation.
9	27	3	3rd	++		2	One delivered 1 year and 7 months back; she is well without any recurrence. One had recurrence after 2 months of Manchester operation.
10	29	2	3rd	++	++	3	One delivered on 1st June 1968 and she is still well and has no recurrence. One had recurrence 6 months after Shirodkar's sling operation.
11	30	1	3rd	—	+	2	One had recurrence one year after Shirodkar's advancement of uterosacral ligaments.
12	32	5 2 living 3 dead	3rd	+++	++	1	
13	32	2	3rd	+++	+++	1	Recurrence of uterine prolapse 3 months after the operation. No cystocele but has mild rectocele.

(Shaw's classification of utero-vaginal prolapse has been used in this article).

seven months back and the sixth one delivered on 1st June 1968. They are all well and have not shown any recurrence till now. It has been noted that in all these cases the length of the uterine canal has come back to more or less normal limits within about six months to two years following the operation. This proves that involution of the supravaginal elongation of the cervix can occur, though the laxity of the introitus remains.

There has been one recurrence in this series, three months after the operation. The uterine descent after operation in this case was upto the introitus, with prolapse of the posterior vaginal wall only. There was no associated enterocele. Originally, this was a major 3rd degree uterine prolapse with big cystocele, enterocele and rectocele. The cause of this recurrence was due to not suturing the rectal and vaginal walls during the closure of pouch of Douglas, and this proves the importance of dissection of the pouch of Douglas before applying the purse string sutures in such major degree of prolapse.

Post Operative Complication

Except for mild fever for about two or three days, and moderate backache for about 4 or 5 days no other post-operative complication was noticed in most of these cases, except in three cases who were febrile and had abdominal pain due to subcutaneous serosanguinous collection. The temperature and abdominal pain subsided with spontaneous drainage. This may be due to the fact that there was no proper haemostasis during operation.

Discussion

While making a critical review of the anatomical results of abdominal cervicopexy as designed by B. N. Purandare, Purandare *et al* (1966), Parmar, *et al* (1967) stated that by this operative procedure the cervix was placed right behind the symphysis pubis, the posterior fornix was wide and the uterus was retroposed. So they opined that the anatomical results were not very sound and due to this broadening of the pouch of Douglas, a pre-existing enterocele may be aggravated. Therefore, pre-operative detection of this complication is mandatory. The other handicaps of this technique are the difficulty in approach to lower segment during subsequent caesarean section, if required, and non-suitability of the operation in the presence of a large cystocele, stress incontinence, enterocele and an advanced 3rd degree of prolapse. Advancement of the bladder in Purandare's operation is, I feel, not anatomical. It can, on the other hand, put a strain on the plicated uterine ligaments when the bladder is full. In his extended Manchester operation, Shirodkar (1960), has put too much stress on the utero-sacral ligaments with their peritoneal covering. This has been proved by the high recurrence rate with this operation which as reported by Sitaram *et al* (1967), is 10% for uterine prolapse, 19% for cystocele and 33% for rectocele, a very high recurrence rate indeed! The sling operation of Shirodkar (1960), in which he uses a fascia lata strip to act as a sling, has the same disadvantage of holding the uterus passively. It has neither the tensile strength nor the power of contraction to absorb

any shock as an active muscle has. This is probably the reason why the cervical tear took place in some of his cases of posterior sling operation.

Williams (1966) has published an ingenious method of tightening the uterosacral and cardinal ligaments. Here again this operation has a limited scope, for it cannot be done when there is an enterocele or a major degree uterine prolapse. A recurrence rate of 15.5% in his technique is high.

The main aim of this paper is to describe a technique by which a simultaneous correction of total uterovaginal prolapse can be achieved through the trans-abdominal route.

By the rectovaginal fusion operation the rectocele and enterocele are corrected. The external oblique fascial sling helps to maintain the uterus in the normal anatomical position. It also supplements the action of damaged pelvic support. Anterior vaginopexy cures not only the cystocele and urethrocele but also brings the vesico-urethral angle into its normal anatomical position and thereby cures the stress incontinence. Repair of the infra-umbilical part of rectus muscle brings back the tone of that muscle to normal.

Summary

(1) An abdominal operation designed to cure the prolapse is des-

cribed and details of 18 cases operated since November 1964 are recorded.

(2) A critical review of other operations for prolapse is presented.

(3) The cause of recurrence in the present series is explained and the flaw in the operative technique pointed out.

Conclusion

A plea is made to give extensive trial to this operative technique.

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See Figs. on Art Paper VI-VII