

Colpo-Sacropexy with Moschowitz's operation using rectus sheath Graft in Vaginal Vault prolapse – A retrospective clinical study.

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Summary : Vaginal vault prolapse after hysterectomy though uncommon is a distressing complication. To assess the factors that may predispose to the development of vault prolapse and enterocele and to determine the success of colposacropexy with rectus sheath graft and Moschowitz operation, a study was undertaken on ten selected patients at S.K. Hospital, Karamsad over a period of last five years. Failure was defined as a symptomatic enterocele or evidence of a third degree enterocele on examination. Ten patients were followed up for a period of one to five years. The cure rate of vault prolapse was 100%. The most common complications were vaginal discharge, urinary tract infection, and superficial dyspareunia.

Thus colposacropexy with Moschowitz's repair is a satisfactory and successful operation for vaginal vault prolapse.

Introduction:

The normal anatomical position of the upper one third of the vagina in the erect woman is directed towards the sacral cavity (Imparato et al, 1992). This position is maintained through an equilibrium between pressures exerted over the vagina and the resistance of the pelvic floor (Angulo & Kligman, 1989). Prolapse occurs due to loss of this pelvic floor resistance against the intraabdominal pressure exerted on the vaginal vault.

Eversion of the vaginal vault occurs three times more frequently in presence of an enterocele, paracolpos tissue damage sustained during delivery, inadequate attention to supporting structures during previous hysterectomy or postmenopausal atrophy and weakness of tissues (Rust et al, 1976).

The surgical approach to the correction of prolapse is via the vaginal or abdominal routes depending on the patients' desire to retain her sexual function and general fitness of the patient. Vaginal surgeries consist of colpocleisis or sacrospinous fixation of the vault. Abdominal operations, such as, a colposacropexy or Zaccharin's abdomino-perineal operation are more

complicated but have better success rates. Colposacropexy results in good elevation and support of the vaginal apex, maintains a functional vagina and obliterates the Pouch of Douglas, hence prevents future enterocele formation (Angulo & Kligman, 1989).

Aims & Objectives :

To assess the factors that may predispose patients to the development of vaginal vault prolapse and enterocele and to determine the success of colposacropexy using rectus sheath graft with Moschowitz's operation in correction of the prolapse with enterocele.

Materials & Methods :

This retrospective study was carried out between August 1992 to September 1997 on ten selected cases of vault prolapse in the department of Obstetrics and Gynaecology, P. S. Medical College and S. K. Hospital & Medical Research Centre, Karamsad. Each patient was selected meticulously after taking a thorough history with particular reference to the indication and type of past surgery, onset and nature of symptoms. Desire to maintain coital function was also noted. Any history of

Table - I
Result and Analysis:

Age	Mean 47.2 years	Oldest-65 years	Youngest 30 years
Socio-economic status		low (100%)	
Gravida	Mean-4.2	Highest-6.0	Lowest-1.0
Parity	Mean-4.0	Highest-6.0	Lowest-1.0
Average spacing		< 2 years (average)	
Home delivery		95%	
Interval between surgery & prolapse	Mean 8.2 years	Earliest-2 years	Latest-14 years

Table II:
Previous operative history

Previous operations	Number of patients
Abdominal hysterectomy	9
Vaginal hysterectomy (VH)	1
Anterior colporrhaphy	1 (with VH)
Posterior colporrhaphy	1 (with VH)
Sling Surgery	nil
Vault suspension Techniques	Operative details not known

Table III:
Indications of previous operations:

Indications	Number of patients
DUB	6
Chronic cervicitis	2
Genital prolapse	2

Table IV:
Presenting Compliants :

Compliants	Numbers of patients
Backache	7/10
Dragging pain	7/10
Dyspareunia	2/10
Urinary complaints (UTI)	8/10
Rectal complaints	6/10
Stress urinary incontinence (SUI)	1/10
Leucorrhoea	2/10

Table V:

Associated Pelvic Findings :

Findings	Number of patients
Presence of Vaginal rugosity	8/10
Cystocele	7/10
Rectocele	5/10
Enterocoele	9/10

Table VI:
Operations:

Operations	Number of cases
Colposacropexy	10
Moschowitz repair	10
Anterior colporrhaphy	6
Anterior vaginoplasty	1
Posterior colporrhaphy	5

Table VII:
Complications:

Complications	Number of cases
Failure (recurrence)	0
Haemorrhage	1
Vaginal discharge	4
Dyspareunia	3
Urinary tract infections (UTI)	3
Stress urinary incontinence (SUI)	1

stress urinary incontinence or other bladder symptoms as well as any rectal complaints were documented before operation. A detailed and thorough physical, gynaecological and pre-anaesthetic check-up were carried out before undertaking surgery. Routine antibiotic prophylaxis and emptying of lower bowels were ensured

A brief description of the operative procedure follows. The vagina was packed tightly with a povidone iodine soaked roller gauze to elevate it. A midline infraumbilical incision was always used to open the abdomen and a strip of rectus sheath was cut (5 cm x 2.5 cm) from its pubic

attachment and was kept immersed in sterile normal saline for further use. The angles of the vaginal vault were held up with Allis' tissue forceps. Pouch of Douglas peritoneum was closed by purse string sutures (1'0' Mersilk) in two or three concentric layers depending on the depth of the enterocele (Moschowitz's repair) in all cases. Vesical peritoneum from the anterior vaginal vault was dissected down for a distance of 1 cm in order to fix one end of rectus sheath over it (Mersilk No. 1). The pre-sacral peritoneum was opened vertically over the second sacral vertebra and the other edge of the rectus sheath was fixed with the anterior longitudinal ligament using the same suture material. Then the pre-sacral peritoneum was closed over the piece of rectus sheath. Oophorhaphy was performed in six patients, omentorrhaphy in five and anterior vaginoplasty in one patient (Table IV). Average time of surgery was 1.5 hours, no patient required intraoperative or postoperative blood transfusion. Patients were discharged after 7 days with particular advice to guard against cough, cold and constipation and to continue pelvic floor exercises.

Results & Analysis :

All the ten patients were called for a detailed follow-up from six weeks after discharge, at first monthly for three months and then six monthly for a period of one to five years. The mean age at the time of Colposacropexy was 47.2 years, all patients belonged to a low socio-economic status, mean gravidity was 4.2, highest and lowest being 6.0 and 1.0 respectively. Parity ranged from 1 to 6, mean being 4. All the deliveries were vaginal and 95% of them were home deliveries. The mean time interval between the 1st surgery and vault prolapse was 8.2 years (Table - I). Nine patients had undergone abdominal hysterectomy, six due to DUB and two due to chronic cervicitis. Two had genital prolapse of which one was operated abdominally. All the primary operations were performed elsewhere and operative details were not available (Table - II & III). Urinary tract infection, backache and dragging pain were the most common presenting features. Only

two patients had a history of chronic cough as a sole manifestation of raised intraabdominal pressure (Table - IV). The associated pelvic findings noted were enterocele in nine cases, cystocele in seven cases and rectocele in five cases. Eighty percent of patients demonstrated vaginal rugosity (Table - V). Besides Colposacropexy and Moschowitz's operation, six cases had anterior repair and five had posterior repair. In one case of mild cystocele, V-plasty from the abdominal route was performed (Table - VI). None of the patients had failure of the procedure in the follow up period. One patient had haemorrhage in excess of 250 ml. intra-operatively. Four patients complained of vaginal discharge which subsided with symptomatic treatment while three patients each had superficial mild dyspareunia and UTI whereas one patient developed stress urinary incontinence (Table - VII).

Discussion

Vault prolapse is a delayed complication of both abdominal and vaginal hysterectomies (Symmonds RL and Pratt JH, 1960). It may occur following damage to the upper vaginal supports, pelvic blood vessels and nerves sustained at the time of hysterectomy, pregnancy and parturition. In our study a high number of vaginal deliveries, a relatively high parity and shorter spacing between childbirth might be contributory, however the techniques of hysterectomy particularly at the pericervical region, shortening of uterosacral and cardinal ligaments and techniques of vault suspension remained unknown. Some of the enteroceles in our study might have been pre-existent and gone unnoticed during previous surgery. Omission of enterocele sac closure is a known predisposing factor (Mattingly & Thompson, 1985). Presence of vaginal rugosity, absence of vaginal contracture and history of active sexual life in most of our patients influenced the route and choice of surgery.

The principles governing successful surgery are effective and sustained vault support, obliteration of enterocele sac and repair of coexistent cystocele and rectocele which were strictly adhered to in our study.

Postoperative stress incontinence is a common complication of this operation (Studd 1884). But in our series UTI was more common, postoperative superficial dyspareunia in the present study might be due to a tight posterior repair. One patient had haemorrhage in excess of 250 ml. intraoperatively. During the follow up there were no recurrences.

Though a small study, success rates exceeding 90% reported by various authors were observed in the present series as well.

References

1. Angulo. A & Kligman. I., Surg. Gynecol. Obstet. 17: 233, 1989.
2. Imparato. E., Aspesi. G., Roretta. E. Surg. Gynee Obstet. 175: 233., 1992.
3. Rust. J.A., Botte. J.M. & Howlett. R.J.: Am. J. O Gyn. 125: 768, 1976.
4. Studd. John: Progress in Obstet & Gynecol.: Vo 396, 1994 Churchill Livingstone.
5. Symmonds. R.E. & Pratt. J.H., Am. J. Obst. Gyn. 11: 899, 1960.
6. Mattingly. R.F., Thompson. J.F.1985: Te Linde's Oper. Gynecol. 6th edn., 583, Lippincott.