VAGINAL HYSTERECTOMY

by

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Vaginal extirpation of uterus for non-malignant indications is recognised by many gynaecologists as a preferential method for the operative management of pelvic diseases, and its advantages over abdominal hysterectomy are well appreciated. In many centres in India and abroad, vaginal hysterectomy is extensively practised and has replaced abdominal hysterectomy (Menon, 1969; Masani, 1971; Pratt, 1976; Smale *et al.* 1978; Vaidya *et al.* 1979; Purandere 1980; Porgess 1980 and Rajan, 1980). The advantages of vaginal hysterectomy are well known with reduced risk and morbidity when compared with the abdominal procedure; and in many instances the vaginal surgery can be done when an abdominal surgery would carry considerable risk. As years go by we find additional indications for the vaginal removal of uteri, and as stated by Pratt (1976) 'if a uterus is to be removed it is best removed vaginally, all things being equal'.

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This report is from the Department of Obstetrics and Gynaecology, Medical College, Alleppey, a centre where vaginal hysterectomy has completely replaced abdominal hysterectomy. Vaginal hysterectomy is the rule for all benign conditions including uterine tumours and adnexial pathology, and also for patients who had an earlier abdominal or vaginal surgery. Abdominal hysterectomy is sparingly employed, and is reserved for difficult pelvic tumours and gross pelvic adhesions. Indeed, 6 out of 7 hysterectomies performed on our service are vaginal, and that too after excluding surgery for prolapse uterus.

In this communication, we however confine to our experience with vaginal hysterectomy in patients with less than 12 weeks uterine enlargement and with no adnexal pathology. Our purpose is to discuss the benefits of vaginal 'open-cuff' technic and the scope of adnexal removal.

Materials and Methods

The data analysed for this presentation was obtained from the case records of 396 consecutive vaginal hysterectomies performed for various indications. Vaginal hysterectomy and plastic procedures employed for uterine prolapse

are not included in this group. The different indications, which included cervical dysplasia, menorrhagia, pelvic tumours, MTP sterilisation and pregnancy complications are detailed in Table I.

fully excluded or treated before the surgery. Epidural anaesthesia was preferred and in the high-risk group, general anaesthesis was employed. Operation was never defferred during menses, and we

TABLE I
Indications

Indication	No. operated	No. included in this study
1. Cervical dystrophies	197 (49.74%)	197
2. Functional uterine haemorrhage	81 (20.45%)	81
3. Uterine fibroids	39 (9.84±)	19
4. Adenomyosis	24 (6.06%)	14
5. Ovarian tumours	15 (3.78%)	—
6. Hypertrophic elongation of cervix	11 (2.77%)	11
7. Pelvic adhesions	7 (1.76%)	7
8. M.T.P. & Sterilisation	6 (1.51%)	3
9. Carcinoma in situ cervix	5 (1.26%)	5
10. M.T.P. complications	2 (0.50%)	2
11. Vesicular mole	2 (0.50%)	—
12. Missed abortion	1 (0.25%)	1
13. Post-molar bleeding	1 (0.25%)	—
14. Paraovarian cyst	2 (0.50%)	—
15. Pelvic haematocele (Ectopic gestation)	2 (0.50%)	—
16. Secondary P.P.H.	1 (0.25%)	1
Total:	396	341

In this group, 36 patients had uterine enlargement beyond 12 weeks size, 15 patients had ovarian tumours, 2 patients had para-ovarian cysts and another 2 patients had pelvic haematocele. Excluding these 55 patients with either uterine enlargement or adnexal pathology, the case records of 341 patients were analysed. Age of these patients ranged from 21 to 62 years, with a mean age of 40.12 years, and one half of the operated patients were below 40 years of age. This series included 1 nulliparous unmarried woman and the rest parous women having 2 to 6 children. There were 32 obese women in this group who had all the specific advantages of vaginal procedure. Any medical disorder was carefully controlled and then the vaginal cuff is

do not delay hysterectomy in relation to the day of menstrual cycle.

Operative Procedure

To be brief, the technic entails a complete circumcision of the cervix and opening on the two cul-de-sacs to be followed by division and ligation of uterosacral ligaments, uterine vessels with the cardinal ligaments and the adnexal stumps. The most important step that requires special mention is the vaginal 'open-cuff' technic: After securing the stumps carefully peritonisation is completed with the stumps kept extraperitoneal. The usual bleeding from the vaginal cuff, especially the posterior vaginal wall, is meticulously controlled and then the vaginal cuff is

left open. This procedure favours proper drainage of the collections and thus reduces post-operative morbidity and prevents the formation pelvic hamatoma and abscess. Possibility of secondary vault haemorrhage is also minimised. The open vault shows perfect post-operative healing and formation of granulation tissue at the vault is seldom a problem.

Salpingo-oophorectomy: Yet another surgical procedure that requires to be detailed is the ovarian removal. When the patient is in the peri-menopausal age (around 48 years) we remove the ovaries at the time of vaginal hysterectomy. It is realised that adnexal removal is made easier by ligating the round ligament separately which makes it possible to dissect the mesovarium and facilitates safe division of the infundibulopelvic ligament. Among the 341 patients operated, 106 (31.08%) had salpingo-oophorectomy, either bilateral in 83 (24.34%) or unilateral in 23 (6.74%). The procedure, however, was differred in patients with atrophic ovaries braced against the pelvic side wall due to atrophy and shortening of the infundibulopelvic ligament.

Previous Operations: If the patients had vaginal deliveries, previous abdominal or vaginal operations were not considered a contraindication for vaginal removal of the uterus. In fact 53 patients had previous operations (14.54%) which included tubal sterilisation, vaginal plastic procedures, laparotomy and caesarean sections (Table II). There were no operative or postoperative problems in these subjects and none of them required blood transfusion.

TABLE II
Vaginal Hysterectomy Following Previous Operations

Operative procedure	Patients	Percentage
Total patients	53	15.54
Tubal sterilisation	46	86.79
Vaginal plastic procedures	4	7.54
Caesarean section	2	3.77
Laparotomy for ectopic gestation	1	1.88

Uterine Pathology

While majority of the patients were sufferring from either cervical dysplasia or functional uterine haemorrhage, uterine fibroids, adenomyosis, MTP sterilisation and pregnancy complications were the other indications for vaginal hysterectomy. Nontheless, the uterine enlargement was less than 12 weeks in all the patients and there was no need for morcellation to deliver the uterus. Small uterine fibroids or fibroid polyps were diagnosed in 19 patients, and 14 patients had symptom producing adenomyosis. MTP and sterilisation was the lone indication in 3 subjects, with another 2 patients operated for MTP complications, one for missed abortion and yet another for secondary postpartum haemorrhage. In 7 patients pelvic adhesions was the indication for hysterectomy, and 5 patients were operated for intra-epithelial cervical carcinoma. Routine blood trasfusion was not required except in 5 patients and the indication will be discussed elsewhere in this article.

Post-Operative Care

We never favour continuous bladder drainage in the post-operative period. Instead, the patients were ambulated on the same day and were encouraged to pass urine. Of the 341 patients, 156 patients (54.25%) passed urine spontaneously on the day of operation. On the next day morning all except 13 patients

(3.81%) had passed urine normally. Except in 2 patients (0.58%) who needed continuous bladder drainage for 3 to 4 days all the others had normal bladder function in the post-operative period.

Patients were encouraged to get up and walk on the next day of operation and were given the normal diet from that time. They were made more comfortable by an enema given on the 3rd day, and by that time they hardly felt that they were operated. If there was no febrile morbidity the patients were discharged home on the 6th day and were advised to report for follow-up after 6 weeks. The post-operative hospital stay was short (6 days) in 319 of the 341 patients, and in only 25 subjects (7.44%) the stay was prolonged by few more days due to post-operative morbidity, and on no occasion the stay was for more than 14 days.

Follow-up: Post-operative follow-up was possible in 180 patients. The vaginal cuff healing was excellent and there were no instances of prolapse of the fallopian tube. While at the initial visit granulation was present at the vault, the subsequent visit showed a completely healed vagina. All patients appeared quite happy and healthy and were fit to return to work sooner. Ten patients were readmitted with vague complaints not directly related to vaginal hysterectomy and were discharged home within 2 or 3 days.

Complications of Vaginal Hysterectomy (Table III)

Immediate laparotomy was performed in 5 patients, one because of difficulty in opening the cul-de-sac due to pelvic adhesions, and the other 4 due to difficulty in controlling bleeding from the uterine stumps. All the 4 patients who had haemorrhage (1.17%) needed blood transfusion. The post-operative period was uneventful in the laparotomy subjects and they were discharged on the 7th day, except 1 who had delay in abdominal wound healing.

TABLE III
Complications of Vaginal Hysterectomy

Haemorrhage (requring laparotomy)	4	1.17%
Difficulty in opening the cul-de-sac due to pelvic adhesions (requiring laparotomy)	1	0.29%
Cystotomy	1	0.29%
Continuous bladder drainage	2	0.58%
Febrile morbidity including vault sepsis	13	3.81%
Secondary haemorrhage (controlled by vaginal packing)	1	0.29%

The bladder was cut open in 1 patient (0.29%) at the time of attempting to open the anterior cul-de-sac. After completion of hysterectomy, the bladder injury was repaired. The cystotomy wound made perfect healing with 7 days continuous bladder drainage. There were no instance of rectal or ureteric injury in this series.

Since the vaginal cuff was left open and no vaginal pack was employed there was hardly any chance for pelvic collections and thus febrile morbidity caused by vault sepsis could be minimised. Only 13 patients had febrile morbidity (3.81%), with 12 patients in this small group having vault sepsis (3.51%). Our treatment for vault sepsis was as follows: If we see febrile morbidity in the post-operative period, we make a pelvic examination on the 5th or 6th day. This procedure permits proper drainage of any infected material through the open vault. If necessary, vaginal examination was repeated after 2 days, and this way we could cure all the patients. We neither change the antibiotics nor prolong the antibiotic therapy

for more than 6 days. No patient had developed pelvic haematoma or pelvic abscess in this series.

Another distinct advantage of the 'open-Vault' technic was that we seldom had problems of post-operative secondary vault haemorrhage. Of the 341 patients operated, there was only 1 occasion (0.29%) where a patient was admitted on the 13th post-operative day with severe vaginal bleeding. The bleeding was controlled by vaginal packing, and the patient was given blood transfusion. After that she made uneventful recovery, and was discharged after 5 days observation.

Discussion

We feel that vaginal hysterectomy is a precise surgical technic which involves minimal blood loss and is less time taking procedure. It is well tolerated by the patients and provides for early ambulation and very smooth convalescence. Even at the time of follow-up visit at the end of 6 weeks, they feel stronger and are able to return to work sooner. All these advantages including the absence of an abdominal scar certainly outweigh some of the disadvantages enumerated in this text.

Moreover, by keeping the vaginal cuff open the post-operative morbidity is considerably reduced. The patient feels comfortable and afebrile soon, and she hardly feels that she was operated and is fit enough to be discharged on the 6th day. Patient comfort combined with short hospital stay go a long way in recommending the 'open-cuff' technic as a routine procedure. We also observe that pelvic haematoma, pelvic abscess and secondary vault haemorrhage are seldom a problem of our patients, which can be explained by proper drainage obtained by the open vault. Those with vault sepsis promptly responded to repeated vaginal examination facilitating drainage of infected material. The open-cuff did not interfere with post-operative vaginal vault healing as revealed by our follow-up studies.

We hold that removal of the ovaries through the vaginal route is not difficult and if done properly is a safe procedure. Separately dividing and securing the round ligament before attempting to clamp the infundibulopelvic ligament ensures safe removal of the ovaries. Hence removal of ovaries in elderly women need not be an indication for preferring abdominal hysterectomy over the vaginal procedure.

Conclusion

This study on vaginal hysterectomy only adds to the popular opinion by the eminant gynaecologists that wherever indicated for benign conditions the uterus is best removed vaginally, especially when the uterus is not very much enlarged. We suggest that the vault is better left open, a procedure which has only advantages and no disadvantage worth a mention. If the proper technic is followed ovarian removal can be accomplished vaginally without any additional risk to the patient. Vaginal hysterectomy can be safely attempted in parous women even if they had undergone an abdominal or vaginal operation earlier.

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