

EBBING POPULARITY OF TRANSVAGINAL STERILISATION AS ANALYSIS WITH REVIEW OF 1052 CASES

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SUMMARY

During 11 years (1970 to 1980) 1052 vaginal sterilizations were done. Vaginal sterilization were at its peak in 1972 and 1973. After the introduction of laparoscopic sterilization in 1974, the popularity of vaginal sterilization diminished and in 1980 not a single case was done vaginally.

Introduction

Vaginal sterilisation was first performed by Von Graffe in 1930. In our country it gained popularity around seventies. The main attraction to lay public at that time was the absence of abdominal scar and comparative shorter post-operative hospital stay. Anatomical situation of fallopian tubes in relation to the pouch of Douglas and posterior fornix made the operation comparatively easier and quicker to gynaecologist. With the result that till 1974 about 20 to 30% of total sterilisation operations were done by vaginal route in most of the hospitals. Abdominal route was mainly adopted for puerperal and concurrent second trimester abortion cases.

As the time passed on the trend gradually changed and by 1980 most of the gynaecologists gave up vaginal approach only for sterilisation operation.

This paper analyses and reviews vaginal sterilisations done at Zanana Hospital, Udaipur in last decade and explores reasons for gradual ebb in its popularity.

Material and Method

From 1970 to 1980 (11 years), 1052 cases have undergone vaginal sterilisation at Zanana Hospital Udaipur in all the three units. During the same period the total number of tubectomies done were 10202. This gives the incidence of vaginal tubectomies 10.31% of total tubectomies. Of 1052 vaginal tubectomy cases, age, parity, selection of cases, associated gynaecological and other conditions, method adopted, concurrent procedures, anaesthesia, post-operative hospital stay, operative and post-operative morbidity, mortality and yearwise distribution of cases were studied.

Out of 1052, 260 cases (24.75%) had interval tubal ligation, 636 (60.46%) had concurrent M.T.P. and evacuation and 156 (14.82%) had other operative pro-

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Accepted for publication on 13-2-84.

cedure vaginally with tubal ligation. Anaesthesia used was general in 743 cases and spinal in 309 cases. The operation was performed in lithotomy position. All the cases were given antibiotics pre-operatively as well as post-operatively.

Observation

Of 1052, 615 (58.47%) cases were from urban area and 437 (41.53%) cases were from rural area.

Criteria for Selection and Associated Gynaecological Conditions

Criteria for selection in eligible women was absence of frank gynaecological lesions like malignancy, uterine tumours, active and acute genital infection, absence of operative scars on the uterus like caesarean section etc. and freely mobile uterus. It was observed that eligible cases usually do not come forward for tubal ligation alone. Majority of the cases (512 or 48.67%) came for M.T.P. Various other conditions associated with multiparity in the series were incomplete abortion in 116 (11.03%), recent septic abortion in 6 (0.57%), missed abortion in 2 (0.19%), uterovaginal prolapse in 62 (5.90%) D.U.B. in 52 (4.94%), benign cervical pathology in 37 (3.54%), complete perineal tear in 3 (0.28%), Bartholin cyst, vesical calculus, ovarian cyst in one case each.

In concurrent M.T.P. cases duration of pregnancy was 10 to 12 weeks in 262 (51.17%) cases, 14 weeks in 59 (11.52%) cases and in the rest it was less than 10 weeks.

Method Adopted

In 28 cases it was done through anterior pouch along with repair operation for utero vaginal prolapse. In all the rest it was done by opening the

posterior pouch. Method of tubal ligation adopted depended upon the choice of the surgeon. In majority of the cases, 922 (87.65%) tubal ligation was done by modified Pomeroy's method.

Concurrent Procedures

Various concurrent procedures done with vaginal sterilisation are as shown in Table 1. Apart from M.T.P. in 512 cases, 118 (11.22%) had evacuation of uterus for various types of abortion, 172 (16.35%) had D & C and 60 (5.89%) had repair operations for uterovaginal prolapse.

Post Operative Stay

Majority of cases, 847 (80.51%), were discharged from the hospital between 5 to 7 days. Forty (3.8%) cases had short post-operative stay of 3 to 4 days. The rest, i.e. 162 cases, had prolonged post operative stay of 11 to 30 days.

Operative Complications

Immediate operative complications were mainly trauma and haemorrhage. The most common trauma was tearing of the tube (49 cases). Cervical tear or laceration occurred in 21 cases, vaginal incision got extended in 20 cases, injury to the rectum in 2 cases and broad ligament haematoma in one case (Table II). In 42 cases abdomen had to be opened up either to complete the procedure on opposite side, or to reach and ligate non approachable fallopian tube which was short or fixed due to chronic infection and for complications like extensive tear of the tube and haematoma formation.

Excessive haemorrhage occurred in 38 (3.16%) cases. This was mainly from the edges of the vaginal wound and due to M.T.P. Three cases required blood transfusion. Both trauma and haemor-

TABLE I
Types of Associated Surgery

S. No.		No. of cases	Percentage
1.	M.T.P.	512	48.67
2.	Evacuation	118	11.22
3.	Sec. Curettage	6	0.57
4.	Manchester repair	38	3.61
5.	Shirodkar repair	2	0.19
6.	Ant. and Post. Colporrhaphy	22	2.09
7.	Biopscervix	20	1.91
8.	Cervical cauterization	16	5.70
9.	Removal of IUCD	60	5.70
10.	Repair of complete perineal tear	3	0.28
11.	Polypectomy	1	0.09
12.	Excision of Bartholin cyst	1	0.09
13.	Removal of ovarian cyst	1	0.09
14.	Trans vaginal cystolithotomy	1	0.09
15.	Dilatation and curettage	172	16.35

TABLE II
Operative Complications

S. No.		No. of cases	Percentage
1.	Tearing and laceration of the fallopian tube	49	4.78
2.	Cervical tear or laceration	21	2.05
3.	Extention of vaginal incision due to manipulations	20	1.98
4.	Injury to the rectum	2	0.19
5.	Broad ligament Haematoma	1	0.09
6.	Haemorrhage	38	3.61
7.	Opening the abdomen to complete the procedure	42	3.92

rhage were observed more in concurrent M.T.P. cases.

Delayed complications were local sepsis in the vaginal wound (96 cases), severe pelvic sepsis including pelvic abscess (28 cases), urinary tract infection (38 cases), secondary haemorrhage (3 cases), and jaundice (1 case).

Very late complications of the procedure could be seen in the form of resistant P.I.D. in 144 cases, backache due to fixity of uterus in 40 cases and tender vaginal scar leading to dysparunia in 86 cases. Seventeen cases could be traced from hospital records who had undergone abdominal hysterectomy for P.I.D.

which could be directly attributed to vaginal tubal ligation.

Mortality

Death occurred in 3 cases (0.28%). In one case severe pelvic sepsis caused pelvic thrombophlebitis and massive pulmonary embolism leading to death on 20th post operative day. One case died of aspiration pneumonia in immediate post operative period and the third one died because of haemorrhage, operative shock and pre-existing anemia.

Year Wise Distribution of Cases

Transvaginal sterilisations were started in our institution in 1969. Year-wise

distribution of the cases from 1970 to 1980 is as shown in Table III. Maximum number of cases were done in 1972 and 1973 while no case has undergone transvaginal tubal ligation in 1980.

TABLE III

Year	Sterilizations total No.	Vag. No.	Sterilizations Percentage
1970	620	37	5.97
1971	625	27	4.32
1972	927	235	25.35
1973	1026	240	23.39
1974	1030	182	17.66
1975	948	132	13.92
1976	1047	96	9.17
1977	666	55	8.26
1978	943	40	4.21
1979	1150	08	0.69
1980	1220	00	0.00

Discussion

Transvaginal tubal ligation was supposed to have following advantages:

1. The operation is easy and takes only 5 to 10 minutes in really experienced hands if it is done as the only procedure.

2. The shorter post-operative stay as compared to abdominal sterilisation.

3. Post-operative pain is less.

4. Psychological recovery of the case is quick as there is no visible scar.

5. It can be performed as an interval procedure or with first trimester termination of pregnancy. It can also be performed in early as well as post partum period when the uterus has involuted to 14 weeks pregnancy size or less (Tamaskar 1970, 1978).

6. No chances of immediate post-operative abdominal complications like distention of abdomen, paralytic ileus and remote complications like incisional hernia (Misra and Gupta 1980), particularly in multiparous ladies.

7. It can be combined with various gynaecological procedures done vaginally.

8. In the general public it's acceptance was more as vaginal operations were considered minor and less risky. There was no fear of opening the abdomen (Tamaskar 1970, Rao and Ghose, 1975).

At our institution the popularity and acceptance of transvaginal sterilisation was at it's peak in the years 1972 and 1973. It's number declined by 50% in 1974 and 1975. From 1975 onwards there was a steep decline in the number reaching to zero in 1980. The decline in the popularity from 1975 to 1979 can be accounted for by a number of factors.

Though the procedure appeared simple in expert hands, number of difficulties like unapproachable anatomical position of the tube (short tube, adherent tube etc.), haemorrhage, deep vagina, straining during operation in light anaesthesia, obesity, restricted field, tearing of the tube and it's mesentery, inadequate illumination etc. made the operation not so simple and safe in every case particularly in a teaching hospital like ours where residents are to be given chance to learn.

Operative complications in the series occurred in 12.5% cases. Morbidity rate of about 9% has been reported by many authors (SenGupta *et al* 1976; Randhawa, 1978; and Gulati *et al* 1979). Tamaskar (1978) reported morbidity rate of 14.5% when it was combined with other minor gynaecological procedure, while it was only 5.5% when it was done alone.

The higher operative complication rate in our cases may be because it was a concurrent procedure in 792 (75.28%) cases. It was a single procedure only in

260 (24.71%) cases. With excessive enthusiasm it was combined with controversial procedures like evacuation of incomplete or missed abortion (118 cases) recent septic abortion (6 cases), repair of complete perineal tear in 3 cases, removed of Bartholin cyst 1 case and M.T.P. 14 weeks gestation in 59 cases.

Delayed post operative complications like resistant P.I.D. in 144 cases (of whom 17 cases have undergone abdominal hysterectomy later on), tender thickened scar in posterior fornix leading to dyspareunia and leucorrhoea were the main complications which brought about adverse publicity and non acceptance of the procedure.

Incidence of venereal or non-specific genital infections is comparatively higher in Udaipur and it's adjoining tribal area. Flare up of infection or secondary infection during operation was a common post-operative complication in cases reported after discharge from the hospital. The actual incidence of delayed complication may be even higher than reported by us as only 60% cases reported to the family planning O.P.D. for follow-up. In

such circumstances proper selection of cases would have averted the situation.

In 1974 though laparoscopic sterilisation had already been introduced in India and was being done at few centres, it was not considered useful for mass tubectomy campaign in our country. In our state it was introduced in 1980. On account of it's mass campaign, availability in rural camps, quicker procedure, less painful nature and the most fascinating ultrashort post-operative stay, laparoscopic tubectomy showed record acceptance by the rural population. This gave final blow to other methods of family planning including already ebbing transvaginal sterilisation.

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