Contemporary Themes

10-year survey of 485 sterilisations

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Part I—Sterilisation or hysterectomy?

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Summary and conclusions

A survey was made of all sterilisations performed in an obstetric and gynaecological unit in Dunfermline in 1965-74 to determine the outcome and complications. Altogether 547 women were sterilised by the modified Pomeroy method, and 485 (88.7%) were interviewed and examined.

No sterilisation was followed by serious complications, and the incidence of even minor complications was low (4.12%). There were no subsequent pregnancies. Altogether 57 women had to be referred for gynaecological operations in the years after sterilisation but only 18 of these had to have hysterectomies.

At interview 59 women were found to have gynaecological symptoms (menstrual disorders in 46), and examination showed that 83 women had a gynaecological condition, which was in most cases unsuspected by the patient. Most of these conditions were minor but three women had carcinoma-in-situ of the cervix. Although 46 women suffered menstrual disorders after sterilisation 104 had done so at some time before the operation.

These results therefore offer little support for the wider use of hysterectomy as a form of sterilisation.

Introduction

Several workers have argued that hysterectomy should have a greater role in sterilisation¹⁻⁶ and have emphasised the defects and limitations of simpler procedures like the Pomeroy operation.

This survey was designed to ascertain (a) the incidence of complications after a slightly modified form of Pomeroy operation for sterilisation, (b) the procedure's failure rate, and (c) the number of women who were referred for further gynaecological treatment after being sterilised. The incidence of gynaecological symptoms and conditions after sterilisation and the incidence of disordered menstruation before and after sterilisation were also assessed.

Method

The names and addresses of women who had been sterilised in one unit from January 1965 to 31 December 1974 were extracted from the

records of Dunfermline Maternity Hospital and Dunfermline and West Fife Hospital. During that time 547 women were sterilised by a modification of the Pomeroy method. This consisted of the excision of a loop of each Fallopian tube and the ligation of the severed ends with a non-absorbable material (Mersilk). Initially the operation was done through a small subumbilical incision but latterly it was done through a small transverse suprapubic incision about three to four centimetres in length.

Each woman was asked to attend for interview and examination and told that her travelling expenses would be paid. Many responded and were seen individually over many months. Some neither attended nor replied. General practitioners helped in identifying patients who had left the district but still lived locally. A second letter was then written to those who had not attended, and more women were interviewed and examined. To secure the co-operation of the remaining women the help of the general practitioners and health visitors was sought, and women who worked during the day were seen in the evenings at health centres near their homes. Even these measures were unsuccessful in persuading some patients to attend, so the remainder were visited at their homes and persuaded to co-operate in the project.

As a result 485 of the 547 were interviewed and examined. Their ages are shown in table I. Those who were not seen comprised 59 who no longer lived in the area and three who had died. None of the deaths was attributable to the operation.

TABLE I—Age distribution at time of sterilisation

Age (years):	≤25	26-30	31-35	36-40	41-45	Total
No (%) of women:	33 (6.8)	96 (19.8)	161 (33.2)	154 (31.8)	41 (8.5)	485

The indications for sterilisation were classified as medical (including those performed on the recommendation of a psychiatrist) in 118 cases; obstetric (including those performed in conjunction with a third caesarean section) in 194 cases; eugenic (those undertaken to prevent the birth of fetuses with probable genetically transmitted abnormalities) in 4 cases; and social (mainly as a form of permanent contraception) in 169 cases. Postpartum sterilisations numbered 254 and interval sterilisations 231.

No patient was interviewed and examined until she had been sterilised for at least two years; and 79 had been sterilised more than nine years earlier.

Results

The case records showed that only 20 (4.1%) women had experienced any complication after the operation. Twelve had had stitch abscesses, six urinary tract infections, one dehiscence of the wound requiring resuture, and one a deep venous thrombosis. None of the patients had become pregnant after sterilisation.

Since sterilisation 57 women had undergone another gynaecological operation (table II). Of the 18 who underwent hysterectomy, five had fibroids, one adenomyosis, two endometriosis, and 10 irregular or heavy vaginal bleeding. None had had a malignant condition.

At interview each woman was questioned specifically about gynaecological symptoms. Fifty-nine patients complained of

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TABLE II—Operations performed subsequently in women who had been sterilised

Operation	No of women	Operation	No of women
Hysterectomy	18	Salpingo-oophorectomy	1
Pelvic floor repair	6	Avulsion of polyp	2
Marshall-Marchetti operation	1	Dilatation and curettage	19
Removal of ovarian cyst	2	Cauterisation of cervix	5
Removal of foci of endometriosis	1	Excision of sebaceous cyst of vulva	1
Reconstruction of Fallopian tubes	1		
		Total	57 (11.8%)

symptoms: 37 of irregular vaginal bleeding, five of menorrhagia, four of dysmenorrhoea, three of premenstrual tension, seven of stress incontinence, and three of leucorrhoea. Several patients were later found on examination to have a vaginal discharge but only three complained about this symptom when questioned.

TABLE III—Conditions revealed by pelvic examination

Condition	No of women
Fibroids (most small and non producing symptoms)	10
Endometriosis (suspected on examination, confirmed by laparoscopy)	1
Cystocele, urethrocele, and/or rectocele	15
Tubo-ovarian mass (found to be chronic inflammatory)	2
Ovarian tumour	1
Cervical erosion	26
Cervical polyp	4
Leucoplakia of vulva	1
Trichomonas vaginalis	10
Monilia	6
Carcinoma-in-situ of cervix	3
Cervical smear showing "doubtful cells"	4
Total	83 (17.1%)

Pelvic examination showed that 83 patients had some pelvic disease of which the patient was unaware (table III). Before being sterilised 104 women had experienced some disorder of menstruation and nearly a third of them had had a curettage. Four of the 13 who had suffered from menorrhagia had to have hysterectomies later, as did three of the 55 who had suffered from irregular menstruation.

TABLE IV—Disorders of menstruation experienced by the women studied at any time before sterilisation

Complaint	No of patients	Operations for complaint before sterilisation	Operation for complaint since sterilisation
Irregular and painful menstruation	8	0	0
Irregular menstruation	55	25 curettages	2 curettages, 3 hysterectomies
Dysmenorrhoea	21	0	0
Epimenorrhoea	3	3 curettages	0
Secondary amenorrhoea	4	0	0
Menorrhagia	13	4 curettages	4 hysterectomies
Total	104 (21.4%)	32 curettages	7 hysterectomies, 2 curettages

Discussion

Every effort was made to interview and examine as many patients as possible because of the realisation that those least satisfied with the results would probably be those least willing to take part in the project and that their absence would invalidate the conclusions. Altogether 88.7% of the women sterilised from 1965 to 1974 were interviewed.

They were sterilised by a modified form of the Pomeroy method, which was favoured because of its low failure rate.⁵⁻⁸ Hughes found that in Aberdeen the failure rate for laparoscopic sterilisation was about five times that for non-laparoscopic methods. This survey has again confirmed that the modified form of the Pomeroy method is unlikely to be followed by pregnancy.

No serious complications followed the operation, while laparoscopic sterilisation has been associated with such grave sequelae as burns of the abdominal wall,^{10 11} gas embolism,¹² haemorrhage,¹³ and injuries to the gastrointestinal tract.¹¹ Experience has also shown that when the modified Pomeroy operation is performed through a small suprapubic transverse incision the patient may be discharged home safely within 60 hours of operation.

Several workers have reported that sterilised women have subsequently had to have other gynaecological operations.^{1 2 5 6 8 14} Some have emphasised that hysterectomy should be more seriously considered as the operation of choice when patients are referred for sterilisation,^{1-1 6 15} particularly for women who have a high risk of carcinoma-in-situ of cervix¹ and for the mentally subnormal,³ but it has also been preferred to sterilisation for the woman who wants no more children.¹³

In this series only 57 (11.8%) of the women who had been sterilised subsequently had to have another gynaecological operation, and only 18 (3.7%) required hysterectomy. In this unit a full gynaecological history is taken from every patient who is referred for interval sterilisation, and if the patient is over 35 years of age and gives a history of recent menorrhagia or severe and irregular vaginal bleeding she is treated by hysterectomy. Few women, however, come into this category.

It is possibly significant that seven of the patients who were sterilised and subsequently had hysterectomies gave a history of having suffered from menorrhagia or irregular heavy vaginal bleeding at some time. On the other hand, no fewer than 104 women had suffered from some form of menstrual disorder before sterilisation. As hysterectomy carries considerably higher mortality and morbidity than sterilisation,^{16 17} the case for the much wider use of hysterectomy for sterilisation has not been made.

The fact that cervical smears taken in conjunction with this survey showed three cases of carcinoma-in-situ of cervix would suggest that a cervical smear should be taken routinely from all women submitting themselves for sterilisation. The discovery that such a patient has carcinoma-in-situ of cervix would make hysterectomy the operation of choice. Even the finding of doubtful cells in a woman over 35 years of age would justify sterilisation by hysterectomy.

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