Contemporary Themes

Psychiatric Aspects of Female Sterilization

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Summary

Follow-up of 151 women who had been sterilized for social or gynaecological reasons one to three years earlier showed that 146 were completely satisfied with the results of the operation on their health and on their sexual relationships with their husbands. The five who were dissatisfied either wished they could still conceive or found the operation had not produced the effect hoped for. On the basis of this study we believe that adverse psychiatric sequelae of sterilization can be kept to a minimum with careful selection of patients. Women should be over 30 or if younger should have had two or more children, and the operation should not be performed at childbirth, in the neonatal period, or during a postabortive depression.

Introduction

The development by Steptoe¹ of laparoscopic sterilization has given impetus to the numbers of female sterilizations being performed. In the United Birmingham Hospitals over the past five years 3,500 laparoscopic sterilizations have been carried out, mostly by the professorial unit, which in 1972 performed 765, thus making this form of sterilization the commonest gynaecological operation (apart from abortion) performed in Birmingham.

With an increasing demand for the operation criteria for selection were becoming less rigid and the very numbers and prospect of further increases prompted the gynaecologists to take stock and see whether their impression that the operation was in the main beneficial was confirmed and that the patients' and surgeons' expectations were being met. Further stimuli to the inquiry were the reports from other centres of undesirable psychiatric sequelae.

Review of the Literature

Ekblad,² in his report on 225 women who were sterilized on social or psychiatric grounds and of whom 85% were simul-

taneously aborted, found that 22% had some adverse response. Of these, 4% were troubled but not upset, 11% regretted the operation and were dissatisfied but had no serious psychiatric sequelae, and 7% were deeply disturbed after the operation. Sixteen per cent of the total had an unsatisfied longing for children, while of the 12 patients who were sterilized and had no children only one was satisfied with the operation. In a subsequent paper³ he reported on 60 patients who had no children and were sterilized including the 12 in this category reported in his previous paper. He found that 47% were satisfied with the operation compared with 82% in his original series. The factors predisposing to adverse psychiatric sequelae were three-fold: women under the age of 25 years; previous history of instability; the "package deal," where sterilization was a condition for termination of pregnancy.

Kaij and Malmquist⁴ suspected that psychiatric sequelae had been due to the high incidence of "package deals" in Ekblad's series (85%) and that these sequelae could be, at least in part, a postabortive reaction. They therefore reported on 179 women whose sterilizations followed their first pregnancy. Of these, 79% were satisfied with the outcome and the authors commented on the remarkable similarity of their findings to those of Ekblad, even though the latter was dealing with a different situation.

Thompson and Baird⁵ reported their follow-up from Aberdeen on 186 sterilized women. Of their series 49 were sterilized and aborted at the same time and 133 were postpartum sterilizations. Of the latter 11 (8.3%) were dissatisfied. Of the 42 who had the operation for medical and psychiatric reasons 10 (24%) regretted the operation. The authors concluded that the operation has material social benefit but that caution should be exercised before operating for medical or psychiatric reasons.

The findings of Barnes and Zusman⁶ were similar. Most of their operations were done at caesarean section and over 25% of the patients regretted the operation. The authors commented that the risk of regret is greater because the patient may feel that she had little choice in the matter and had insufficient time to consider the implications.

Black and Sclare⁷ reported on 480 sterilized patients, of whom 168 had a psychiatric follow-up. Of these, 52 (31%) had simultaneous therapeutic abortions. Altogether 86% of their patients benefited, and of the 14% who were worse most had a previous history of chronic neurotic handicap. These authors support the conclusions of Thompson and Baird.⁸ This study differed from that of Kaij and Malmquist⁴ in that no patients were sterilized immediately after parturition.

Lu and Chun⁸ from Hong Kong and Cowgill *et al.*⁹ from Thailand reported that 90% of their patients were satisfied with the operation. Health was unchanged or improved, "sex life" was better, with increased coital frequency at an age when it was decreasing in the general population, and there was increased happiness in marriage and family life. The patients in both centres were referred for sterilization by family planning clinics.

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Present Study

A total of 151 patients were followed up in not less than one year after the operation to gauge the longer-term results with particular emphasis on presence or absence of psychiatric sequelae and whether the patient or her husband had any regrets.

Most of the patients attended for interview with their husbands and the interview was structured to provide standard information for a form listing details such as age, family and personal history, number of children, previous psychiatric illness, previous response to pregnancy, reasons for sterilization, social class, and effects of operation on marriage, family, and sex life. In addition attention was paid to the presence or absence of regret, presence or absence of psychiatric sequelae, and the aggravation or otherwise of a pre-existing instability.

As a number of patients failed to attend for follow-up (38%) there was a possibility that those who attended may have represented a disproportionate number of patients who were on the one hand satisfied or on the other discontented with the operation. To overcome this it was decided to do a domiciliary visit on "defaulters." Thirty-six such patients were chosen at random and it was frequently not possible to inform the patient of the visit. Nevertheless, after identity was proved the visit was conducted in a relaxed manner, and these 36 patients provided useful controls.

Not one of the 151 patients was recommended for sterilization on psychiatric grounds, though the history subsequently elicited may have been sufficient indication, particularly if those responsible for selection were unfamiliar with the literature on the subject. The duration of follow-up was between one and three years.

As it was the policy of the department to terminate on established medical grounds there were no patients in this series with a simultaneous therapeutic abortion, so in this respect it differed from the studies of Ekblad,² Thompson and Baird,⁵ Black and Sclare,⁷ and others.

Altogether 146 patients (96.7%) expressed themselves as completely satisfied and their husbands reported that their sexual relations improved considerably after the fear of pregnancy had been removed. None of these patients showed any psychiatric sequelae attributable to the operation. Five patients (3.3%) expressed dissatisfaction.

Results

DISSATISFIED PATIENTS

Case 1.—Age 35; three children. The patient was of limited intelligence, in social class IV, and had a strong cultural resistance to the operation. She had not suffered in her health since the operation but was quite adamant that if she had her choice again she would not have the operation.

Case 2.—Age 32; one child. History of five spontaneous abortions which patient had claimed were seriously affecting her health. She was a Jamaican and had a strong cultural resistance to the operation. At the interview she said that she would rather have become pregnant, even at the risk of further spontaneous abortions. From the psychiatric aspect there was little handicap and there was no deterioration in her mental state after the operation.

Case 3.—Age 38; two children. A year before sterilization this patient had a therapeutic abortion after which she suffered a severe depression which persisted after sterilization. At the time of follow-up, however, she was less depressed but still expressed regret over sterilization as she had previously expressed regret over the abortion.

Case 4.—Age 28; two children. This patient had requested a sterilization on social and economic grounds but her financial state had improved. She now regretted limiting her family to two and would have preferred at least another child. This improvement in her finances had not been foreseen by the patient or by the surgeon, and what appeared a valid indication two years before was no longer valid.

Case 5.—Age 29; two children. This patient's marriage had been threatened because of her frigidity which, she alleged, was due to her

fear of childbirth. The sterilization was done to remove this fear but it did not remove her frigidity. In fact, the marital situation deteriorated, for her previously valid excuse no longer applied.

ANALYSIS OF WHOLE SERIES

Age Distribution (table I).—Most patients were in the 30-40-year age group and had therefore completed their families.

Number of Children (table II).—In most cases patients had two or more children.

Number of Children of Patients Aged under 30 (table III).—Each of the 13 patients in this group had two or more children, and this seemed to correlate with less likelihood of undesirable sequelae of the operation.

Social Class (table IV).—Eighty-seven per cent of the patients were in social class III and above, and the remaining 13% were almost entirely in social class IV, only one patient being in social class V. Among those in social class IV were some socially mobile immigrants who were challenging for social class III or higher. These figures suggest that the service provided was not necessarily going to those in greatest need and that the more articulate and the more strongly motivated were making a greater use of the service. This is in accord with other aspects of the welfare services, in that if the middle classes have equal access the poor and underprivileged are exposed to unfair competition and go to the end of a longer queue or do not join the queue at all. Present policy of selecting patients who are at greater risk for earlier operation while they are still at the maternity hospital may help to alter these figures in the future. Referral of patients from the domiciliary service of the Family Planning Association is also helping to correct this imbalance.

TABLE I—Age Distribution of the 151 Patients

Age in Years	20-24	25-29	30-34	35-39	40-44	45
No. (%) of patients	1 (0.7)	16 (10.6)	56 (37.1)	50 (33.1)	23 (15.2)	5 (3.3)

TABLE II—Number of Children of Patients in Whole Series

No. of children	1	2	3	4	5	6
No. (%) of patients	4 (2.6)	37 (24.5)	40 (26.5)	32 (21.2)	20 (13.2)	18 (12.0)

TABLE III—Number of Children of the 13 Patients under 30 Years

No. of children	2	3	4	5	6
No. (%) of patients	3	3	3	2	2

TABLE IV—Social Class

Social class	I	II	III	IV	V
No. (%) of patients	2 (1.3)	41 (27.2)	88 (58.3)	19 (12.6)	1 (0.7)

Previous Psychiatric Illness (table V).—Out of 35 patients (23%) with a previous history of psychiatric illness 10 (6.6%) had had inpatient treatment. Such a history did not affect the result of the sterilization, and this finding is in contrast to those of previous investigators who made special mention of a history of previous psychiatric illness as being an indicator of psychiatric sequelae of the operation. One such patient, aged 23, had a history of two previous episodes of psychotic depression in hospital treated on both occasions with electric convulsion therapy, yet her response to sterilization was very satisfactory and there was no aggravation of her psychiatric handicaps. She had four children.

TABLE V—Previous Psychiatric Illness among the 151 Patients

	No. of Patients
Puerperal depression	8 (3 treated in hospital)
Depression (treated at home)	15
Depression (treated in hospital)	5
Phobic anxiety	7 (2 treated in hospital)
Total	35 (23.2%)

TABLE VI—Adverse Psychological Sequelae after Sterilization

Authors	No. of Patients in Series	No. of Patients Adversely Affected
Ekblad (1961) ³	225 (85% Aborted simultaneously)	49 (21.8%)
Kuij and Malmquist (1965) ⁴	179 (All postpartum sterilized after 1st pregnancy)	38 (21.2%)
Black and Sclare (1968) ⁷	168 (52 Simultaneously aborted)	24 (14.3%)
Thompson and Baird (1968) ⁵	186 (49 Simultaneously aborted and 133 postpartum)	25 (13.5%)
Present series	151 (Nil aborted, nil postpartum)	5 (3.3%)

Adverse Psychological Sequelae of Sterilization.—Table VI presents the adverse results of sterilization in the series of papers published. It is in no sense a "league table," for the selection of patients differed, but it is possible that the selection was a major factor in contributing to the variations in adverse responses.

Discussion

Since the introduction of the laparoscopic thermocoagulation technique of Steptoe¹ female sterilization has become a most common operation, and undesirable sequelae merit study and an attempt to find their causes. Ekblad² highlighted the presence of psychiatric sequelae of the operation and listed younger age groups of women with no children as predisposing factors. His findings were based on a sample which included 85% of simultaneous abortions, and the abortion rather than the operation may have contributed. This possibility gains support from a previous report by Ekblad¹⁰ which showed similarities in the incidence and nature of psychiatric sequelae of therapeutic abortions on psychiatric grounds.

The present series differs from previous reports in that patients were not selected for the operation on psychiatric grounds and neither was a previous history of psychiatric illness a contraindication. The main indications were socioeconomic and gynaecological, the latter being mainly repeated spontaneous abortions, and one patient with one child had severe hypertension.

Satisfaction with the operation does not mean that there are no undesirable sequelae. For example, 25% of the patients quoted some menstrual upset, usually heavier periods. In the absence of a prospective study of this particular symptom the cause is still a matter for dispute, and to date there is no established association between the gynaecological symptoms and sterilization. Cultural attitudes accounted for postoperative reports of adverse symptoms in Hong Kong women.⁸ In the present series such factors appeared to operate with the West Indian patient.

From our limited experience the most stubborn cases of dissatisfaction and regret were women sterilized because of a medical condition but who would have wished to have more children. Fortunately such indications tend to decrease with advances in medical and obstetric practices and, in addition, most of these women with unsatisfied maternal wishes accommodate reasonably well to a regrettable situation provided they receive sympathetic understanding and adequate social support. A few, while insisting initially that sterilization was the only solution to their problem, on regaining their health and ability to manage their affairs expressed the wish that they

would like to have had another baby. Case 4 was an extreme example of this. In providing opportunities to assume other than maternal roles one can reduce the frustrations of many of these women. In contrast, many more women regretted that they did not have the operation earlier when they had fewer children.⁸

Postpartum sterilization can be a most traumatic experience should the child fail to survive, and sufficient interval of time should therefore be allowed after delivery before sterilization is considered. This gives the couple time to assess the situation in the light of the survival and health of the baby. The death of a husband shortly after a sterilization can also be a most difficult complication, but fortunately this is rare. Laparoscopic sterilization, which requires only a short stay in hospital, makes interval sterilization more practicable and should eliminate the tendency to sterilize at caesarean section, which has been reported to have a relatively high incidence of psychiatric sequelae.⁶

Similarly it is undesirable to sterilize nonpuerperal patients immediately, for in a series of 910 patients undergoing laparoscopy sterilization¹¹ 6 (0.6%) reversed their decision to be sterilized while their name was on the waiting list.

There is general agreement that sterilization is contraindicated where marriage is unstable and the probability of separation or divorce is high, though our own findings indicate that women with prior neurotic symptoms suffer no psychiatric sequelae. A problem may arise where women with prior psychological disturbances expect sterilization to solve their difficulties, particularly in the case of frigidity. It is therefore impossible without the most careful evaluation to decide whether sterilization creates new psychiatric problems or has failed to meet the patient's unrealistic expectations.

Conclusions

Permanent contraception through female sterilization is playing an increasingly important part in family limitation. Demand is increasing; and adverse psychiatric sequelae have been reported; but the present inquiry indicates that these may be minimized if the following points are borne in mind.

- (1) The patient should be over the age of 30, and if younger should have had two or more children.
- (2) The operation should not be performed at childbirth or in the neonatal period, when the risk to the newborn child is greatest. Sterilization could, with the death of the child, compound the loss and precipitate a severe grief reaction. Furthermore, the mother's decision at that time may not be as valid as one as she may make three to six months later.
- (3) The patient should not be suffering from a postabortive depression, for a sterilization may reinforce this reaction.
- (4) The patient should be culturally adjusted to the operation.
- (5) The operation should not be undertaken for frigidity.
- (6) Apart from conclusion 3 psychiatric considerations need not be entertained.

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