

rhoea after repeated injections. A WHO multicentre study showed that the percentage of users with total amenorrhoea gradually increased from 13.4% after the first injection to 35% after four injections⁵.

The return of menstruation and fertility after discontinuing DMPA follows the return of ovulation. The return of ovulation and fertility is related to the persistence of DMPA in the user's circulation. After a 150-mg injection of DMPA, the mean interval before ovulation returns is 4.5 months. In a large study comparing conception rates in women discontinuing various methods, conception was delayed in former DMPA users when compared with women discontinuing oral pills and IUCDs during the first 9 months following discontinuation. Almost 70% of DMPA users, however, had conceived within the first 12 months following discontinuation⁶. The delayed return of fertility has important implications for counselling candidates for injectable contraceptives.

Injectable contraceptives appear safe for use immediately postpartum and have not been associated with problems of infant nutrition or development when used by lactating women⁶. Different studies have shown increased milk production, but no significant changes in the concentrations of lactose, protein or lipid.

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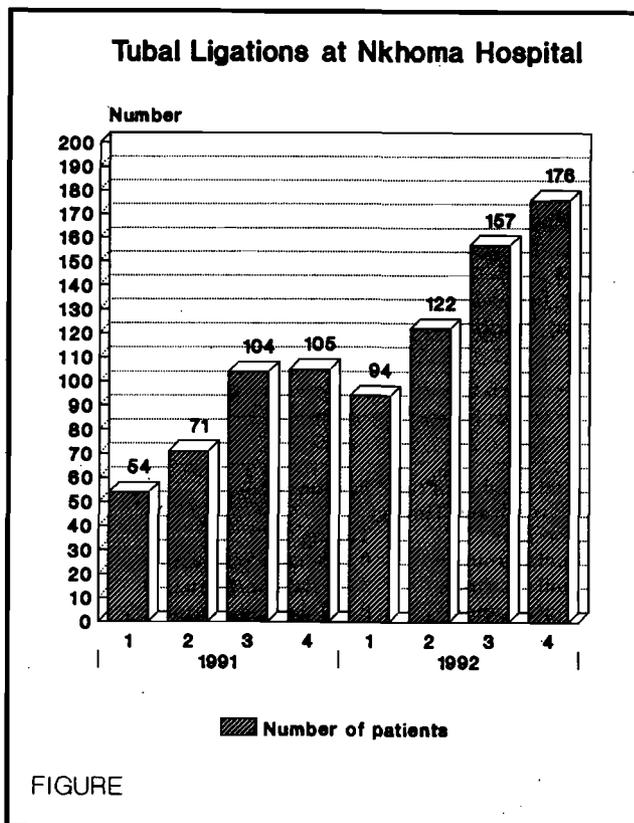
Surgical Contraception Programme at Nkhoma Hospital

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For the last few years at Nkhoma Hospital we have been giving special attention to Child-Spacing and in particular to surgical contraception. With the help and encouragement of the Association for Voluntary Surgical Contraception (AVSC) we increased the number of tubal ligations from 54 in the first quarter of 1991 to 175 in the 4th quarter of 1992.

The most important part of the programme is the counselling and selection of the patients. Because tubal ligation is a permanent procedure, the patient must be well informed and the spouse and parents must also be involved in the decision making.

AVSC is an international organisation with its regional headquarters in Nairobi. They support any hospital that wants to participate in their programme. The support consists of training of staff, supplying equipment and reimbursement of expenses. In return they require that their technique is adhered to and any complications reported. A uniform consent form must be used and all counsellors and surgeons must attend one of their workshops.



FIGURE

The Surgical Procedure

For women, this procedure can be done either after delivery (post partum tubal ligation) or on the non-pregnant uterus (interval tubal ligation).

The post partum Tubal Ligation (TL)

This is very easy to perform and has few complications. A small (1.5 - 2 cm) incision is made just under the umbilicus. Once the abdomen has been entered, the skin is manipulated with retractors until the tubes can be seen. A Pomeroy procedure is done and the wound is closed. The patient goes home the same day.

The Interval Tubal Ligation

This needs a bit more skill but is easy to do once the technique is mastered. First, an uterine elevator is inserted into the uterus through the cervix (just as one would insert a IUCD). Later this will be used to bring the uterus in contact with the anterior abdominal wall and to manipulate it from side to side. The abdominal wall is now cleaned and draped. A small (2 - 5 cm) incision is made under local anaesthesia in the midline of the lower abdomen. Once the abdomen has been entered, the patient is put in the Trendelenburg position. This, together with deep inspiration will help to move the bowel away from the pelvic organs. Now the uterine elevator is used to bring the tubes in sight near the incision. Again a Pomeroy Procedure is done and the wound closed.

With both techniques the patient must be well informed and cooperative. Preferably the counsellor nurse should be present to calm and comfort the patient.

Obesity, previous scars or infection and distended bowels make the procedure more difficult, but there are no absolute contra-indications. Complications of these procedures are bleeding, visceral injuries and infection.

If the procedure cannot be completed under local anaes-

thesia, either light sedation or general anaesthesia should be given.

Vasectomy

This can be done with the no-scalped technique. With this procedure a very sharp "artery" forceps is used to pierce the skin and to take hold of the vas deferens. Both sides are done through one wound and under local anaesthesia.

Results

The following table shows the number of tubal ligations done at Nkhoma Hospital from January 1991 - September 1992.

Table

1. Total number of tubal ligations done:	707	
2. Approach and Timing:		
Procedure	Timing	Number
Minilaparotomy	0 - 48 hours postpartum	376
Minilaparotomy	3 - 7 days postpartum	42
Minilaparotomy	8 - 27 days postpartum	22
Minilaparotomy	28 days postpartum	132
With caesarean section		122
3. Type of Anaesthesia:		
Local without sedation		493
Local with light sedation		30
Local with heavy sedation		38
General anaesthesia		12
Spinal anaesthesia		134
4. Number of living children (at time of procedure):		
0		0
1		3
2		27
3		71
4		103
5		130
6 or more		373
5. Age of patients (in years):		
19 or less		0
20-24 yrs		3
25-29 yrs		70
30-34 yrs		338
35-39 yrs		223
40-44 yrs		23

To run a successful surgical contraception programme, attention should be given to the following:

1. Good counsellors. They should be well trained and well informed.
2. The hospital should be patient-friendly. Do the procedure when it suits your patient. At Nkhoma we do Tubal Ligations on every week day as well as on Saturdays if needed. If the patient must wait 3 days for the next theatre list, many of them will abscond.
3. The procedure must be as pain free as possible. Remember that the best advocates of this procedure will be satisfied clients.
4. It should be offered together with other methods of child spacing as a free service.

We have been very satisfied with this new technique. Over half our patients come from areas other than Nkhoma which shows that there is a big need for this programme at other hospitals.

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Breast Feeding as a Family Planning Method

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Mothers have breast fed their babies from time immemorial. Breast feeding is a natural process that is recognised by all societies regardless of their level of sophistication as beneficial to the health of both the mother and child. Many taboos for its protection exist. With the introduction of Western concepts and mass media commercial advertising this harmonious consensus on the importance of breast feeding has been somewhat eroded. Socio-economic and cultural changes have had their impact on the practice. In the developed world immediately after World War II in 1946, bottle feeding with artificial formula replaced breast feeding as the in-thing. Developing countries in their effort to keep up with the Joneses adopted the practice also. The advertising media had a field day promoting the virtues of bottle feeding and won many followers. The myth was widely spread and believed that breast feeding would ruin the configuration of the breasts and reduce the attractiveness of the mother. Breast milk substitutes became popular in both the developed and developing world. Their use has caused many deaths in the latter countries.

In the early 1980s WHO and UNICEF launched a counter offensive to curtail this campaign of advertising breast milk substitutes in developing countries. Many babies in these countries died as a result of poor hygiene, ignorance of the optimal concentration, inadequate funds to maintain regular supply and lack of clean water. In the developed countries there is a trend back to breast feeding, but many mothers in the developing world, particularly those in the urban areas, continue to use artificial feeds. This sets an example that the poor rural mothers copy.

Lactational Amenorrhoea

Traditional societies recognised that prolonged breast feeding imparted infertility as evidenced by lactational amenorrhoea. Many taboos prevailed which aimed at protecting this practice.

Within a few hours of delivery the sensitivity of the nipple increases markedly, and sucking results in afferent nervous stimuli which pass to the hypothalamus and on to the pituitary gland. The result of suckling is, initially, a profound suppression of ovarian activity with no evidence of either follicle development or ovulation.

The mechanism through which breast feeding causes lactational amenorrhoea and anovulation is complex and ill-understood. However, it is known that breast feeding causes profound suppression of ovarian activity.

Direct effects of Breast Feeding on Birth Interval

Breast feeding can prolong the length of the birth interval directly through its ability to cause lactational amenorrhoea and anovulation. The hyperprolactinaemic state of lactating mothers is thought to be responsible for the postpartum amenorrhoea and anovulation. Prolactin is produced from the anterior pituitary when the nipple is stimulated manually or by suckling through a neuroendocrine reflex. Prolactin is the hormone responsible for the synthesis and secretion of milk.

In the postpartum period the basal levels of prolactin are higher than in the non-pregnant state. The neuroendocrine reflex is very much heightened during lactation. Therefore, stimulation of the nipple either manually or by suckling results in markedly elevated plasma prolactin levels. However, if lactation is not established the basal prolactin levels return to the non-pregnant levels within the first six weeks postpartum and the prolactin producing reflex becomes blunted. Therefore, continued breast feeding is necessary in order to maintain high plasma prolactin levels.