EVALUATION OF MINILAP STERILIZATION IN COMPARISON TO LAPAROSCOPIC FALOPE RING STERILIZATION

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SUMMARY

This is a study of 492 elective sterilizations performed in service hospital during the period of January 1983 to May 1985. In two hundred sixty-eight minilaparotomy and in 224 falope ring sterilization were performed and results analysed. The study indicates a relatively greater hospital stay, more post-operative analgesics in minilap sterilization, as compared to falope ring. High technical failure, more skilled operator and high cost of instrument in cases of laparoscopic sterilization puts some reservations for its use. The authors are convinced that minilaparotomy is superior but decision to select the type of operation should be left wih the patient.

Introduction

With the awareness in our society, women are becoming more conscious about small family norms. Besides vtrious contraceptive measures available, which have a place for spacing the children, permanent measure is becoming more popular in multipara. In recent years we observe, oral contraceptives are lossing their ground because of overweight and cardio-vascular complications. Intra uterine contraceptive device are becoming unpopular because of infections and menstrual disorders and lack of reliability. As women are seek employment more and more, they prefer to complete their family early and have permanent sterilization done early so that they can have carefree life and concentrate on economic and home front.

Authors have made an attempt to find out a comparative value of the two of the most popular methods of permanent female sterilization i.e. mini-laparotomy sterilization and laparoscopic falope ring application.

Material and Methods

Four hundred and ninety-two elective sterilizations were performed by authors in service hospital between January 83 to May 85. Each patient was offered the choice of minilap sterilization or laparoscopic sterilization. The patient elected their own procedure after consultation with their doctors. Each patient was assessed pre-operatively by the gynaeco-

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logist as well as anaesthetist. General anaenthesia was used in all cases.

Observation

There were 268 minilaparotomy sterilizations and 224 laparoscopic sterilizations. The operative time was measured from incision to closure. The operative time for mini-laparotomy group averaged 14 minutes with a range of 8-20 minutes, whereas it was 12 minutes with a range of 6-18 minutes in laparoscopic group.

The average number of analgesic doses in the minilap group was 4 whereas it was 2 in the laparoscopic group. In the laparosropic group largest percentage of cases (57.1%) required only two doses, whereas in minilaprotomy group largest percentage (48.5% cases) required 4 or more doses.

The mean hospital stay in mini-laparotomy was 4 days (64.5% cases) whereas it was 12 minutes with a range of 6-18 minutes in laparoscopic group.

Table I shows the number of days until the patient resumed normal activity on a sujective basis. This period varies from average of 7 days in minilap group versus 5 days in laparoscopic group. Technical failure is defined as procedure that could not be completed as planned and other method was resorted by the surgeon (Brenner 1981). There were no technical failures in minilaprotomy group and there were 17.9% technical failure in the falope ring group. There were 4 cases (1.78%) of tubal transection with haemorrhage requiring lapartomy, and in 4 cases (1.78%) one or both tubes were not visualised and required exploratory laparotomy.

TABLE I

Days Before Ability to Resume Normal Activity

Days before ability to resume normal activity on subjective basis	Minlap	Laproscopic
Range	3-12	2-8
Mean	7	5

There was no subsequent pregnancy in minilap group in a follow-up of 120 cases for a period of 12 months. The laparoscopic sterilization group had 2 subsequent pregnancies (1.9%) in a follow-up of 104 cases for a period of 12 months.

Discussion

Minilaparotomy sterilization procedure could be performed with less expensive equipments, less surgical skill and fewer complications, though with increased rate of post-operative pain and hospitalization. Osathanondh (1974) introduced minilap sterilisation in rural Thailand and advocated the possibility of para-medics being able to perform the procedure. The reported failure rate with this procedure ranged from 0.2 to 0.4% (Mc Cann 1980). In our series it is Zero at the end of a follow-up of 12 months. Operative time in Julien and Meyer series (1981) ranged from 7 minutes to 45 minutes with an average operative time of 12.3 minutes in falope ring sterilization, while in our series the time ranged from 8-16 minutes with an average of 12 minutes. Julien's upper limit of operative time was higher than ours, because they also performed lysis for pelvic adhesions for proper visibility. Post-operative pain was more in falope ring application possibly due to ischaemia of the occluded tubes (Leggat 1980 and Pelland 1977). Letchworth *et al* 1980 found no significant difference between the post-operative pain following minilap and laparoscopic Hulka clip sterilization. In our series post-operata-

tive pain was little more in minilap than falope ring sterilization. But difference is not statistically significant and just required few doses more of analgesics in the former group. Ability to resume normal activity including house hold work in our series is 7 days for minilap sterlization group and 2-8 days in laparoscopic group. This higher number of days to resume normal work in our Indian setting is because the women take longer time to resume normal work due to low health and for them normal work means all house hold work.

The falope ring procedure was popularised by Yoon *et al* (1974). They reported failure rate as 0.53%. In their series, the most common complication was tubal transection which is not life threatening. Julien and Meyer (1981) had 3.1% of tubal transection in his series of 447 laparoscopic sterilization. In our series tubal transection rate was 1.78%. In our series there was no failure in minilaparotomy sterilization. whereas failure rate recorded is 1.9% in falope ring sterilization.

It is concluded that laparoscopic procedure has relatively shorter hospital stay, less post-operative pain and early resumption of normal activity. The major disadvantages are high cost of instrument, high incidence of technical failure. In our series, in 8 cases (3.57%) laparotomy had to be resorted. Minilaparotomy on the other hand has an average of being well recognised simple technique low failure rate. The disadvantage of minilap includes relatively longer hospital stay and greater post-operative pain.

It is very difficult to give a final answer regarding the choice of method for permtnent female sterilization. Authors feel convinced that minilap sterilization is a better and safer procedure and can be recommended in any setting. However, laparoscopic sterilization has a definite place in a hospital setting, more so in a teaching institution.

Patient is the key person who should choose a sterilization procedure for herself after full consultation with her doctor.

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