

INTRODUCTION OF LAPAROSCOPIC STERILISATIONS IN ANDAMAN AND NICOBAR ISLANDS—AN EVALUATION OF ACCEPTABILITY IN COMPARISON TO MINILAPAROTOMY

By

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SUMMARY

From February 1985 laparoscopic sterilisation was introduced in Andaman and Nicobar islands. The method followed, prominent complications during and after the operation and failures are discussed. A comparison is made between laparoscopic method and minilaparotomy method for sterilisation. For this purpose the results of minilaparotomy are also evaluated. Finally the acceptability of both the methods to the public of these islands is analysed in relative terms.

Introduction

After the introduction into the Islands in February, 1985, laparoscopic method for female sterilisation found general acceptance among the people after initial hesitancy. But very few failures of the procedure, made the public averse to the new technique. The article describes briefly the method and material, the results, and complications and finally discusses the reasons for the lack of public support.

Material and Methods

A total of 707 female sterilisations were performed by the author during a period of 28 months, starting from February, 1985, when laparoscope first found its way into the Islands. Out of these 707 sterilisations, 459 were minilaparotomies by Modified Pomeroy method, all done under spinal anaesthesia. These consist of puerpureal, postabortal, and interval cases. Of these

459 cases, 18 were done in rural camps and the rest of 441 were done at G. B. Pant Hospital, Port Blair, the only referral Hospital of these Islands. During the same period of 28 months, 248 laparoscopic sterilisations were performed by the author. These 248 were purely interval and post-abortal cases. All the laparoscopic sterilisations were done under sedation with pethidine 75 Mgm and atropine 0.6 Mgm given intramuscularly, about 30 mts before the operation. Just before operation local anaesthesia was given with 1% xylocaine, at the single puncture site. KLI Laparocator with KLI falope bands were used, except in the initial 124 cases, where some other cheaper brand of bands were used. Out of the above 248 laparoscopies, 50 were done at the referral G. B. Pant Hospital and the rest of 198 were done in rural camps in remote Islands like Hut Bay, Baratang, Kadamtala, Rangat and Long Island. An analysis is made of the complications, failures of both these methods, upto a follow-up of 1 year. The accepta-

bility of the two methods and the reasons for the same are discussed.

Results

During a period of 28 months, from February, 1985, 707 female sterilisations were done by the author at G. B. Pant Hospital, Port Blair and in rural camps. Minilap with modified Pomeroy was the method in 459 cases and laparoscopy under local anaesthesia was the method in 248 cases.

period. As against, in minilaparotomy cases on 4 occasions the incision had to be extended to dissect away adhesions or to remove T.O. masses.

Menorrhagia and Polymenorrhoea are the commonest of menstrual disorders, and fewer patients complained of oligomenorrhoea, and amenorrhoea or dysmenorrhoea. In the minilaparotomy group of 459, 40 complained of menstrual disturbances (9%). Surprisingly only 2 patients of laparoscopy had the complaint of any men-

TABLE I

Method	No. of cases	Done in Hospital	Done in Rural camps	Anaesthesia	Mean Hospital Stay
Minilaparotomy	459	441	18	Spinal	6 days
Laparoscopy	248	50	198	Local	20 hrs.

The mean Hospital stay in minilaparotomy cases was 6 days. In laparoscopy cases the mean Hospital stay was 20 hours.

As all the minilaparotomies were done under spinal anaesthesia, complications like spinal hypotension, respiratory depression and failure of anaesthesia were seen in 25 out of 459 cases (5.4%). On the other hand with laparoscopy method under local anaesthesia, there was momentary pain or discomfort to the patient, especially observed during tube handling by the laproscator. In the present series of 248, there were no complications like subcutaneous emphysema, excessive haemorrhage, internal injury, or cardio respiratory depression. However in 3 cases one of the tubes in each case could not be banded, because of dense adhesions and in all these 3 cases, it was preferred to leave those unapproachable tubes alone, rather than attempt a laparotomy, because these cases were done in rural camps. There was no conception in any of these cases upto 1 year of follow-up

strual disturbance and both had scanty menses (0.8%).

Out of 459 minilaparotomy cases, 60 complained of backache when followed upto one year (13%). As against this number none of the patients in laparoscopic group had backache, that followed the laparoscopy.

Vague abdominal and G.I.T. Symptoms like pain in the region of incision, indigestion, gas trouble, diarrhoea, are very commonly encountered. In minilaparotomy group, 50 and in laparoscopy group only 5 had such complaints (11% and 2% respectively).

The commonest apprehension among patients who had laparoscopic method was, the possibility of failure. This kind of fear was expressed before the operation and even after the operation, upto a period of 6 months, when they were generally reassured of the success of the technique. Among the 248 cases, 30 had such premonition very strongly (12%). On the

other hand none of the patients undergoing minilap method of sterilisation had any such fear.

There were no failures in this small series of 459 minilap sterilisation cases (0%). But among the laparoscopic group of 248 cases, 3 had conceived when followed upto 1 year (1.2%). All the 3 cases were re-operated by minilaparotomy for religation by Modified Pomeroy technique. In 2 cases the band was found broken and in one it was found on the mesosalpinx, adjacent to the tube. All the failures occurred in the initial 124 cases, in which the falope bands were of cheaper quality.

There was no mortality in any of these 707 cases.

Discussion

Anklesaria (1969) and M. Brar and A. S. Saini (1986) reported menstrual disorders as 15.8% and 15.17% respectively. Sarla (1959) reported only 5% of the patients to be having menstrual disorders. In the present series of 459 cases of minilaparotomy menstrual disorders were noted in only 9% of the patients. And in 248 cases of laparoscopy only 0.8% complained of menstrual disorders as shown in Table II.

In the present series of 707 cases, backache was complained by 13% of minilaparotomy patients and none of laparoscopy patients. Anklesaria (1969) reported backache in 5.47%, Pandit (1961) in 18.68% and M. Brar and A. S. Saini (1986) in 17.2%. Abdominal and G.I.T. symptoms and complaints were seen in 11% of minilaparotomy cases of the present series, and in 2% of cases of laparoscopy. M. Brar and A. S. Saini (1986) reported 11.6% of such complaints.

The failure of minilaparotomy for sterilisation in the present series of 459 cases is nil (0%). Adatia and Adatia (1966) have given a failure rate of 0.43%, M. Brar and A. S. Saini (1986) 0.8%, Coyaji (1964) 0.1% and M. Alam and S. Kala (1986) 0%. The general trend over the years had been one of decreasing failure. In the 248 cases of laparoscopy in the present series, there is a failure of 1.2%. Yoon *et al* (1974) reported a failure of 0.53%, and M. Alam and S. Kala (1986) of 1.9%.

Technical difficulty but not failure was experienced in 0.9% of minilaparotomy and 1.2% of laparoscopy groups in the present series. However none of these patients conceived in a follow-up of one year. M. Alam and S. Kala (1986) reported the technical failure rate in minilap and laparoscopy as 0% and 17.9% respectively. In

TABLE II
Difficulties and Complications

Sl. No.	Complications	Minilaparotomy %	Laparoscopy %
1.	Anaesthesia complications	25 (5.4)	Nil
2.	Operative difficulties because of adhesions	4 (0.9)	3 (1.2)
3.	Menstrual disturbances	40 (9)	2 (0.8)
4.	Backache	60 (13)	Nil
5.	W.D.	15 (3)	Nil
6.	Abdominal and G.I.T. Symptoms	50 (11)	5 (2)
7.	Fear of pregnancy	Nil	30 (12)
8.	Failures	Nil	3 (1.2)

the present series the laparoscopic group of patients were preselected after careful history and physical examination and so this might have contributed for fewer technical difficulties.

Complications of laparoscopy like subcutaneous emphysema, neurogenic shock, injury to bowel, and omentum, bleeding, transection of tubes, and death did not occur in the present series of 248 cases. In 4 cases (1.3%) uterine perforation by the elevator was noted. In their analysis of 17,520 cases, Raj *et al* (1986) noted uterine perforation in 1.09% cases, tubal resection in 0.14% laparotomy in 0.03% for haemorrhage; shock, pulmonary oedema, and bronchospasm in 0.035% and death in 0.019%.

Conclusions

The present series of 707 cases is not large enough to conclusively state the superiority of laparoscopy as regards lesser side effects after the operation. The indications are that the patients have very much less complaints after the operation when compared to those having minilaparotomy method. The hospital stay is considerably less, and once the instrument is procured, recurrent operative expenditure is less. If the facilities permit, administration of short general anaesthesia should remove any pain felt by the patient during operation. The complications of minilaparotomy are within the general figures stated in the literature. But there is no failure in the present series of minilaparotomy cases. On the other hand, though laparoscopy method proved to be more comfortable for the patient. (None of the patients had any serious complications during the operation and there were lesser post-operative complaints during follow-up). The patients and the public have one and only one strong

objection to the technique, that some cases of failure will be there. It is of very common knowledge that the average man is very much averse to the permanent method of sterilisation, but once decided on this course, he wants not to bother about the possible risk of any failure. There, then is the reason for the lack of general public acceptability of the method.

The Andaman and Nicobar Islands offer the advantage of easy follow-up, because of the well organised medical services of this place which are entirely in the hands of the Government. There is practically no public enterprise in this place. The general awareness of the public is also good, the literacy being 51.6%. The social structure is well knitted, all the regions of India being represented in these Islands. The economy is good, and the unemployment is very less.

The present awareness of the people, made them realise the greater failure rate of the laparoscopic method when compared to minilaparotomy. They should be further educated to the level, wherein they would be able to realise the convenience of laparoscopic method in suitable cases, and be prepared to accept the small risk of failure, which hopefully comes down with time.

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