

PRELIMINARY STUDY ON LAPAROSCOPIC LIGATION IN KASHMIR

by

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Abstract

Laparoscopic sterilization was carried out on 271 patients, of these 117 patients underwent termination of pregnancy at the same time. 154 patients had interval laparoscopic ligation performed. The procedure was mostly performed under local anaesthesia preceeded by pre-medication. The response of patients from urban and rural areas was seen, also note was made of the complications and the failure of the procedure.

Introduction

Laparoscopy has now become an important part of gynaecological procedures. Since it is a quick and relatively safe procedure, its use in laparoscopic sterilization has gained importance in developing countries. The effectiveness of various techniques of laparoscopic sterilization

have been studied by different authors and this prompted us to carry out a preliminary study on Laparoscopic sterilization with falope rings.

Material and Methods

Laparoscopic sterilization was carried out on 271 patients, of these 117 cases had M.T.P. carried out at the same time, while 154 cases underwent interval laparoscopic ligations. One hundred and sixty-eight cases (61.99%) belonged to urban area, while 103 cases (38.01%) were from rural areas. The procedure was carried out by a single puncture technique and the pneumoperitoneum was created with air with the help of KLI insufflator. Ligation of the tubes was done by the application of falope rings. Most of the patients were given sedation as premedication and

TABLE I

	No.	%		No.	%
Laparoscopic Ligation	271	14.8	Termination + Laparoscopic ligation	117	48.17
Ligations (Abdominal or Vaginal)	1559	85.2	Interval Laproscopic ligation	154	58.83

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then xylocaine was injected at the site prior to the procedure.

Results

Greater number of cases of Interval sterilization were performed.

TABLE II
Sedation Given

Type of Sedation	No.	%		No.	%
Inj. Pethidine 50 mgm Inj. Phenargan I/M	121	44.65	Inj. Fortwin 1 ampoule I/M	18	6.64
Inj. Fortwin 1 ampoule I/M Inj. Phenargan 50 mgm I/M	78	28.04	Inj. Pethidine 100 mgm I/M	41	15.13
Inj. Calmpose 10 mgm I/M Inj. Pethidine 50 mgm I/M	4	1.48	General Anaesthesia	4	1.48
Inj. Calmpose 10 mgm I/M Inj. Fortwin 1 ampoule I/M	7	2.58	Extra-supplementation with Inj. Pethidine 100 mgm I/V or Inj. Diazepam 10 mgm I/V	100	36.9

TABLE III
Complications and Period of Stay in Hospital After Laparoscopic Ligation

Complications	No.	%	Stay in Hospital in days after Laparoscopic ligation	No.	%
Trauma to the tube	4	1.47	1	8	2.95
Perforation of the uterus during manipulation	3	1.11	2	93	34.32
Bradycardia	2	0.74	3	158	58.30
Haematoma	2	0.74	4	4	1.48
Laparotomy	2	0.74	5	5	1.84
Post-operative vomiting	2	0.74	6	1	0.37
Bowel Injury	nil	nil	7	1	0.37
Difficulty or failure to ligate a tube	2	0.74	8	1	0.37
Injury to Ovary	1	0.36			
Total	18	6.64	Total	271	100.00

TABLE IV
Failure Rate

Failure	No.	%
True failure due to slip of falope ring	2	0.74
Failure due to wrong application of falope ring	2	0.74
Failure due to undiagnosed pregnancy at the time of lapa- roscopic ligation	7	2.58
Total	11	4.06

The combination of Injection Pethidine and Phenargan was preferred. The commonest complication was trauma to the tube with the prongs. Maximum stay in the hospital after laparoscopic ligation was 3 days.

Discussion

Ligation by the laparoscopic technique constituted 14.0% of all the ligations performed in our hospital. Interval laparoscopic ligations were performed on 56.83% of cases, while termination combined with ligation by this technique was performed in 43.17% cases, Table I. The response to laparoscopic ligation was greater from the urban section of women 61.99%, whereas rural women constituted only 38.01% cases. Lampaphayom *et al* (1980) also had greater number of patients from urban area 53.0%, the remainder from rural areas. Maximum cases of interval ligation were para 3, where termination was combined with ligation the greatest number of cases were of para 4.

Laparoscopic ligations were mostly performed under premedication and local xylocaine, Table II. In 44.65% cases the premedication administered was Inj. Pethidine 50 mgm and Inj. Phenargan 50 mgm intramuscularly. In 28.04% of cases Inj. Fortwin 1 ampoule and Inj. Pethidine 50 mgm intramuscular was given. Only in 1.48% cases was general anaesthesia administered. In 36.9% cases local anaesthesia had to be supplemented with intravenous Inj. Pethidine 100 mgm or Inj. Diazepam 10 mgm. The combination of Inj. Pethidine and Inj. Phenargan was preferred as it gave good analgesia for the technique. Shinde and Krishna (1981) have performed most of the laparoscopic ligations under local anaesthesia with pre-operative sedation. Argueta *et al* (1980) used intravenous premedication with local anaesthesia of lidocaine.

The incidence of complications in our series was 6.64%, Table III. While Shinde *et al* (1980) had an incidence of 2.2 per 1000 and a mortality of 26 per 100,000.

We did not have any mortality in our series. The complications were mainly encountered during the procedure. The commonest was trauma to the tubes while applying the falope rings. If the tube was oedematous or the cornual end was caught, it tended to slip and get cut while applying the rings. It was realised that this complication was common with beginners as they tended to pull the laparoscope while applying the rings. Oozing from the cut ends was stopped by the application of rings at the two cut ends. Shinde and Krishna (1980) encountered the same complication and dealt with it in a similar manner. Yoon *et al* (1977) encountered the problem of tubal resection in 53 of 2643 procedures. The next common complication was perforation of the uterus during manipulations or introduction of the dilator. This complication can however be eliminated by use of Semm's uterine manipulator although one has to compromise with better mobilisation. In 1 case perforation occurred at the cornual end with rapid development of haematoma in the mesosalpinx. Laparotomy was performed immediately and salpingectomy of that side was done. In 2 cases the tube on one side could not be ligated due to adhesions and consequently it was not possible to lift the tube. Injury to ovary was minor due to the prongs inadvertently touching the ovary.

The average stay in the hospital varied between 1 to 3 days. Prolonged stay was deliberate for various reasons, predominantly to observe such patients and for those patients who came from long distances, although majority of them could be discharged the same evening. The patients who had some complication were kept longer than 4 days till they were considered fit to be discharged.

The failure rate in our series was 0.74%, Table IV. In these cases a second look laparoscopy was performed and the falope ring was found to have slipped from one of the tubes. In 2 cases the falope ring had been applied on the mesosalpinx. In 7 cases the patients were already pregnant at the time of ligation. The early pregnancy was missed during the clinical examination, the patient being either in the lactational period, or did not know her L.M.P. or was in the luteal phase at the time of the ligation. Argueta *et al* (1980) report a failure rate of 1.4%. In case of failure the patients did not mind having a second look laparoscopy performed as they found it to be a quick and safe procedure.

Summary and Conclusion

Laparoscopic ligation with falope rings was performed on 271 cases. Incidence of failure was 0.74% and of complications 6.64%. All the laparoscopic ligations were performed by the consultants and registrars. With experience and care the results can be improved. If carried out by experienced laparoscopists, it is a fair-

ly safe and quick procedure. Suchdeva *et al* (1981) is of the same opinion. It is a safe, simple and effective method of sterilization and the added advantage of quickness of the procedure and short stay in the hospital makes it attractive and acceptable to the patients.

Conclusion

Laparoscopic ligation was found to be a safe procedure if carried out by an experienced laparoscopist. As the stay of the patient in the hospital was reduced, it was easily accepted by the patients.

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