

LAPAROSCOPIC STERILIZATION CAMPS

by

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Introduction

Laparoscopic sterilization was proposed by Anderson in 1937 and described by Power and Barnes at the University of Michigan in 1941 Palmer from Paris in 1947 and Steptoe from Britain, Frangenheim in Germany reported with details and enthusiasm on the expanded possibilities. In 1960's the development of 'cold' fiberoptic light sources gave more scope for laparoscopy.

Laparoscopic ring sterilization consists of application of inert silicone rubber bands around a loop of fallopian tube under laparoscopic view. These bands were first introduced by In Bae Yoon in 1973. They are made of silicone rubber material which is composed of dimethyl polysiloxane with 5% barium sulphate. This sialastic rubber is of special consistency, so as to retain more than 90% of its memory when applied to the tube. These Yoon rings are 2.2 m.m. thick with

an inner diameter of 1 m.m. when unstretched and 6 m.m. when stretched on the loader.

Laparoscopic ring sterilization apart from being simple, offers great advantages in terms of reduced operating time, need for less pneumoperitoneum and being easily teachable.

The fact that the patient can be sent home within a few hours of the operation is a great advantage and this single factor per sé has been a major factor in raising the patient acceptability for sterilization operation.

Camp approach in female sterilization is gaining popularity because it provides opportunity of pooling all the facilities and technical manpower at a specified place and time. This specially organised technical pool is then put to best economic advantage by performing maximum number of operations in a specified period of time.

Material and Method

In Rajasthan State, to achieve the target large number of sterilization were done by laparoscopic method from year 1979. In Bikaner district laparoscopic sterilization camps are being organised in various urban and rural areas of the district since March, 1980. In present study, analysis

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and follow up of 3000 cases of laparoscopic sterilization from March 1980 to May 1982 in various camps held in Bikaner district, were done. Majority of the cases were done by the team from Gujarat and rest of the cases were done by the team from Sardar Patel Medical College, Bikaner. Desired information is gathered from the sterilization case cards. Sterilization case cards were having all the information about the history, examination, details of operation and follow-up. Follow-up of all the cases were done by the Medical Officer I/C Minicap, Bikaner, through the various doctors of the P.H.C., where the camps were held, for the period extending to 18 months. First follow-up visit was by the M.O. I/C Minicap at the camp site after 7 days and then monthly on the fixed dates of monthly meetings. In this way various complains and complications were gathered from all the operated cases of laparoscopic sterilization.

Observations and Discussion

Total number of 4682 sterilizations were performed from March 1980 to May 1982 in Bikaner district, of which 3000 were laparoscopic and rest were by the conventional method. Most of the sterilizations by the conventional method were performed in the P.B.M. Hospital, Bikaner, attached to S.P. Medical College, Bikaner, whereas most of the laparoscopic sterilizations were performed in the camps.

The present study concluded that 73.4% of women were in the age group of 25 to 34 years. Hindu women were 93.24% and only 5.48% women were Muslim. Women belonging to urban area were 35.85% and those of rural area were 64.15%. Illiterate women were 80.72%. Majority of the women were para 4 and above. Only 4.43% of women were having 2 children.

Number of male children was definitely a green signal for sterilization. Important observation was that number of self motivated cases were 84.2% and only 15.8% of women were motivated by other motivators. Last delivery of the women were less than one year age in 72.1%, that showed the desire to adopt family planning operation before having the next issue. At the time of sterilization, 358 women were pregnant. A strong trend emerged away from post partum sterilization toward interval sterilization.

All the laparoscopic sterilizations were performed under local anaesthesia.

Complications

Immediate

In the present study 2 laparotomies were performed for bleeding from mesosalpinx and in 2 cases, there was failure to perform laparoscopic sterilization.

Sterilization, slight bleeding occurred in 60 cases, which was managed by application of another one or two rings.

Yoon and King (1977) experienced tubal transection 53 times out of 2643 procedures. The tubal transection in majority of cases occurs due to excessive pull on the tube. This can be avoided by applying ring on the middle third of the tube (certainly not near the cornual end) and depressing the scope while slipping off the ring.

There was no major complications. Pain during operation was complained by 968 women.

Table I shows a comparison of the safety attained in the current series with that reported in previous surveys. It appears to be somewhat greater in our series.

TABLE I
Reported Rates of Failed Attempts, Laparotomy and Mortality

Report	No. of procedures	Failed attempt per 1000	Laparotomy rate per 1000	Death rate per 100,000
AAGL, 1974	66,494	7.00	5.30	7.5
AAGL, 1975	76,842	6.00	4.2	0.0
RCOG, 1976-77	29,577	7.50	12.10	10.2
Dr. P. V. Mehta 1979	10,100	1.09	0.1	9.90
Present series 1982	3,000	.66	.66	0.0

AAGL = American Association of Gynaecologic Laparoscopists.
RCOG = Royal College of Obstetricians and Gynaecologists.
N.R. = Not recorded.

TABLE II
Complications

Complications	No. of cases	Percentage
<i>Immediate:</i>		
Laparotomies	2	0.06
Failed attempt	2	0.06
Slight bleeding from the tube	60	2.00
Pain during operation	968	32.26
Uterine perforation	Nil	0.0
Intestinal complication	Nil	0.0
Death	Nil	0.0
<i>Post-operative Complication during First Week:</i>		
Vomiting	120	4.0
Pyrexia	385	12.83
Serous discharge	615	20.5
Pelvic pain	150	5.0
Vaginal bleeding	804	26.8
<i>Late Complication:</i>		
Bilateral T.O. masses	1	0.03
Pregnancy	6	0.02
Menstrual irregularity	Nil	0.0
Sexual disturbances	Nil	0.0
Psychosomatic change	Nil	0.0

Post-operative complications during 1st week

Pyrexia occurred for a day or two in 385 women, vomiting by 120 women,

serous discharge from the stitch line was present in 20.75% of cases requiring few dressings.

Pelvic pain was complained by 5% of

the cases, vaginal bleeding for first 24 to 48 hours occurred in 30% of cases.

Late Complications

One woman developed bilateral tubo-ovarian masses after laparoscopic sterilization. She had medical termination of pregnancy, which remained incomplete and became septic. At P.H.C. the proper facility to do M.T.P. is a vital need to avoid sepsis in complete abortion.

Pregnancy occurred in 6 women during follow-up. Three women were admitted to the P.B.M. Hospital for M.T.P. and abdominal sterilization, showed that ring was present on mesosalpinx in first case, on round ligament in second case and in third case ring was present on both sides of tube, but one loop was very small.

No menstrual, sexual or psychosomatic change had been found in any women.

Conclusion

A preliminary report regarding the use of these sialastic bands and their relative safety was published in 1974 and since then more and more articles have appeared to confirm their efficacy and safety (Chatman, 1978). The method of laparoscopic electric cauterisation of the tubes has gradually lost its popularity because of the serious potential problems, it can have (Levinson, 1975), the spring loaded clips have failed to become popular because of the significant failure both in

their technical application and failure rate in sterilization (Farooqui and Bazgoli, 1975).

Laparoscopic sterilization camps have started a new epoch in the field of family planning. The laparoscope originally devised as a sophisticated and delicate instrument for diagnostic work in the fashionable clinics of the west, has found its most fruitful use as a portable compact instrument for rapid mass sterilization in the vast under developed regions of the east. A bright future is seen until misused in hands of unskilled personnel.

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