

## ORGANIZING LAPAROSCOPIC STERILIZATION CAMP AND FACTORS PROMOTING SUCCESS

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### SUMMARY

The experience of organizing and conducting 24 laparoscopic camps by one unit from a teaching institution are given. Laparoscopic sterilizations were done on 960 selected cases without any complication. The reasons for rejecting 82 cases unsuitable for camp surgery will be helpful for persons conducting such camps. A brief demographic review is given which shows that 74.5% of the work of sterilization is done on women with 3 or more children and more camps will help to decrease No. of women with 3 and more children remaining unsterilized.

### Introduction

Mass sterilizations in rural areas are necessary for achieving our goal of population control. Poor patients who have to earn their bread daily do not like to prolong their stay in the hospital for more than a day or two unless they are seriously ill. The surgical and indoor facilities available in rural area are inadequate for mass sterilizations. Laparoscopic sterilization has provided answer to both these problems. The method is simple safe and quick. The equipment is portable. No anaesthesia except local is required and woman can return home within 6-8 hours after the operation. All this has made

laparoscopic sterilisation very popular in a short time.

Twenty-four laparoscopic sterilization camps were organised by Department of Obstetrics and Gynaecology, Dr. V.M. Medical College, Solapur during the period 15th March 1982 to 18th December, 1982 (2 camps during March and 22 camps during September, November and December, 1982). During above periods the programmes are not likely to be disturbed by monsoon, or because of water problem, extreme heat or Diwali Festival.

A good publicity of the camp was done by the District Health Officer. The previously operated patients are the best advocates for motivating others. Monetary benefits (more incentives for camps) and arrangement for transport facilities for the patients help to collect many acceptors.

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(I) Previous institutional practice to master the technique of laparoscopic sterilization is very essential for anyone undertaking camp surgery and training of surgeons in camps should be avoided as it is likely to create wrong impressions in the minds of the patients undergoing the sterilizations.

One of the advantages of laparoscopic sterilisation is that it can be done simultaneously with first trimester medical termination of pregnancy. However, we practice this only in the institution and in the camps, M.T.P. was not done on any of the cases. Such patients were called to the hospital, earliest at their convenience.

The team for laparoscopic sterilization consisted of 2 trained doctors, one anaesthetist, one trained nurse and one trained attendant.

(II) Selection of cases: Proper selection of cases is essential to avoid complications.

A thorough clinical check up was done in all cases to exclude respiratory or cardiovascular disorder.

Moderate or severe anaemia and systemic infection.

Puerperal and post abortal cases where uterus was palpable per abdomen were excluded.

Internal examination was done in every case to exclude pelvic infection, fixed retroverted uterus, tubovarian mass or ovarian cyst and mild ascitis etc.

Patient with scar of previous operations as caesarean, hysterotomy etc. are excluded.

All such patients were advised to come to hospital for needful. (It is better to avoid laparotomy in camps).

All patients were called in the morning on empty stomach and routine urine analysis and hemoglobin estimation was done.

Very young patients with 2 children (both less than 2 years age) were dissuaded from permanent sterilization and I.U.Ds. were advised in such cases.

#### *Preoperative Preparations*

1. All patients had nothing by mouth for 8 hours.

2. They were asked to void urine before coming on operation table.

3. Inj. Atropine 6 mg. was given 15-30 minutes before operation.

4. All patients had sedation by one of the following methods.

(i) IV Inj. Pethidine 75 mg. + Inj. Siquil 10 mg.

(ii) IV Inj. Pethidine 50 mg. + Inj. Diazepam 10 mg.

(iii) Tab. Largaetil 10 mg.  $\frac{1}{2}$  hour before and IV Inj. Pethidine 50 mg. + Inj. Diazepam 5 mg.

5. Inj. T.T. 0.5 mg. was given to every patient.

#### *Technique*

Both the single puncture and double puncture techniques were used. The latter is found more convenient as

(i) Vaginal manipulations are not required and also an assistant to do it.

(ii) Chances of uterine perforation and ascending infection are minimised.

(iii) The abdominal puncture wounds need no stitch and can be sealed with benzoin.

(A diagnostic Olympus laparoscope with fallope ring applicator through second puncture in the assembled unit used by us.)

The patients were given a high trendelenberg position by raising the foot end of the operation table on 10 inch stool. (At many P.H.Cs. and rural places operation tables with provision for lowering head end are not available).

Lithotomy is necessary for single puncture instrument as vaginal manipulations are many times required though not for every case (It is particularly necessary with retroverted uterus).

For double puncture 5½' length bench is used in place of the table, one end is raised on a writing table. The patient can be conveniently placed in trendelenberg position with this arrangement.

Three tables are arranged in a C shaped manner and the light source and pneumoperitoneum apparatus are kept in the centre. If operation room is small, 2 tables are arranged to give trendelenberg in opposite directions and the light source and pneumoperitoneum equipment is kept in the middle.

Such arrangements facilitate quick work with restricted equipment.

In between the procedures the laparoscope was washed with sterile water, dried with dry sterile towel/or spirit swab and sterilized in the formaline vaporiser.

Other instruments were cleaned in boiled hot water and dried and cleaned with spirit swab.

No serious wound or pelvic infection was reported in the 960 cases operated so far.

#### *Post-operative Care*

Inj. Penidura 6 Lacs. was given to every patient.

Patients were sent home after 6 to 8 hours Analgesic Tablets were prescribed for 2 days.

#### *Difficulties and Problems of Laparoscopic Sterilisation Camps*

(1) Patients come for laparoscopic sterilisation after suspecting early pregnancy with the impression that pregnancy will not continue after the operation.

(2) Proper history is not available be-

cause of low educational status and understanding of the patients.

(3) Patients and motivators bringing them deliberately give false history and dates of L.M.P. to avoid postponement of operation or rejection.

(4) Overenthusiastic young patients with very small children (less than 2 years) need to be dissuaded.

(5) Because of low socio-economic status patients have poor personal hygiene with skin infections on abdominal wall and vaginal discharge.

(6) No trained anaesthetist, trained nurse or theatre attendant in available locally and a large team has to be taken out.

(7) Interrupted electric supply and inadequate water supply causes delay and inconvenience in finishing work.

#### *Advantages*

Patient in rural area have a high pain threshold, and good resistance. Most of them have thin abdominal walls and procedure becomes easy and quick.

The number of operations were restricted to 25 to 30 per day per Laparoscope. This ensures—

(1) Proper preoperative check up and selection of cases.

(2) Good post-operative management.

(3) Helps to avoid undue hurry in the procedure, particularly sterilization of instruments and rapid pneumoperitonium.

(4) Minimum inconvenience to all concerned as work was over by evening and team could return to Solapur.

(5) Conducting 2 camps per week by one team and many patients can take advantage of this convenience.

A brief review of the work done during the camps is as follows:

As seen from Table 960 laparoscopic sterilizations were done in the 24 camps, average number being 40 per camp. 7.8% or 82 cases were rejected.

Total 31 or 28% of cases had pregnancy or incomplete abortion when they presented as cases of lactation amenorrhoea and bleeding mistaken as normal period.

TABLE I

No. of camps	No. of lapar. ster. done	Average per camp	No. rejected	Percentage
24	960	40	82	7.8

TABLE II  
*Reasons for Rejecting Laparoscopic Sterilisation in Camps*

Reason for rejecting	No. of cases	Percentage
<b>A. OBSTETRIC</b>		
1. Pregnancy 8-12 weeks	20	24.4
2. Incomplete abortion	3	3.65
3. Home delivery [No TT given]	6	9.77
4. Delivered within 10 days	2	
5. Local sepsis	9	10.9
<b>B. GYNAEC</b>		
1. Fixed retroversion	3	3.65
2. T. O. mass/ovarian cyst	4	4.87
3. Scars of previous operation	2	2.43
4. T.B. abdomen	3	3.65
5. Venereal disease	2	2.43
<b>C. MEDICAL</b>		
1. Heart disease [valvular hypertensive arrhythmias]	7	8.52
2. Severe anaemia Hb < 6 gms.	5	6.09
3. Pulmonary T.B.	2	2.43
4. H/O fever	1	1.2
5. Skin disease of abdominal wall	2	2.43
6. Epilepsy	1	1.2
<b>D. SURGICAL</b>		
1. Hernia-diphragm/ventral	—	—
2. Kyphosis/scoliosis	—	—
<b>E. MISCELLANEOUS</b>		
1. 2 Children below 2 years	8	9.76
2. Single woman—No child	1	1.2
3. Axe injury or other injury	1	1.2
<b>Total</b>	<b>82</b>	

10.9% or 9 cases showed evidence of local puerperal sepsis, foul smelling lochia, tenderness over uterus and adnexa and subinvolution of uterus. 14% patients were rejected for gynaecological causes as fixed retroversion, ovarian cyst, T.O. Mass or T.B. abdomen which was subsequently proved and treated at General Hospital, Solapur. Two patients had primary syphilitic sore on vulva.

21.8% cases were rejected for medical diseases, 4 had mitral stenosis (fully compensated), 2 had arrhythmias and 1 had hypertensive heart disease.

There were 2 cases of pulmonary T.B. with cavity. One patient got epileptic convulsions just prior to doing the pneumoperitonium. Possibility of xylocaine sensitivity was thought of but later the husband gave history of epilepsy in the woman.

Laparoscopy in camps needs to be avoided in all the above cases to avoid complications which have a bad effect on the programme.

All the same laparoscopy provides good opportunity for medical check up of rural women.

Maximum acceptors 366 or 38.1% were between age of 26 and 30 years and total 57% acceptors were below age of 30 years which is a happy trend. In 1970 B. P.

Patel estimated that 2.1 births are avoided for each case of sterilization done before 30 years age. 1.5 births for each case done after 30 years.

Thus  $549 \times 2.1 = 1153 + 411 \times 1.5 = 616$  births will be avoided.

TABLE IV  
No. of Living Issues

No. of living children	0-2	3	4 and above
No. of cases	245	303	412
Percentage	25.5%	31.6%	42.9%

Only 25.5% women had 2 or less children and only this much work will be helpful from point of view of quick control of population while tremendous part of the work (74.5%) is only helpful to avoid complications of grand multiparity and further eroding the resources of hospital.

The number of acceptors with 2 sons formed 54.4% while that with no son formed only 1.2%. Improvement in educational and social and economic status of women will only help to change this picture.

TABLE III  
Age wise Distribution

Age	Below 20 years	21-25	26-30	31-35	36 and above
No. of cases	9	174	366	306	105
Percentage	0.9%	18.1%	38.1%	31.8%	10.9%

TABLE V

No. of sons	Nil	One	Two	Three and more
No. of cases	12	219	519	210
Percentage	1.2%	22.8%	54.4%	21.6%

TABLE VI

Cases	Hindu	Muslims	Others
No. of cases (Total)	894	66	—
Percentage	93.13%	6.87%	—

In our experience laparoscopic camps if properly organised and conducted will help to increase the No. of sterilisations round the year.

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This shows 6.87% acceptors were Muslims which is little less as compared to 10% muslim population in the district.

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