COMPLICATIONS OF LAPAROSCOPIC STERILIZATION IN RURAL CAMPS

by

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SUMMARY

Laparoscopic sterilization has become one of the commonest laparoscopic procedures in modern gynaecology. A review of 14,040 laparoscopic tubal ligations performed at 47 rural camps over a period of 7 years, between January 1977 to March 1984 is presented. One hundred and fiftyfour (109'34/10000) of these had various complications. Only 1 (0'71/10000) required laparotomy, which was necessitated by laparoscopy itself and not sterilization procedure. There was one mortality (0'71/10000).

Introduction

In recent years, laparoscopic sterilization has become quite popular in the developing countries and the trend is on the rise. It is said to be simple, fast, and with few contraindications. The incidence of complications varies from series to series Baggish *et al* 1979; Corson 1972; Katz 1979; Kleppinger 1977). The present series establishes the safety of the procedure in a camp setup and reveals the nature and the incidence of complications.

Material and Methods

A total of 14,040 laparoscopic sterilizations were performed between January 1977 and March 1984 in 47 rural camps.

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The average age of the patients was 25.3 years and the average parity 3.

Of the sterilizations, 99.01% were performed with silastic bands and 0.99% were performed with spring loaded clips. Single puncture technique was used in 78.8% cases, using Storz 11 mm diameter operative laparoscope or K.L.I. Laprocator. Double puncture technique was employed in 21.2% cases, using Storz 7 mm diameter laparoscope. Direct trocar insertion without prior induction of pneumoperitoneum was done in 61.2% cases, and pneumoperitoneum was first induced in 38.8% cases, using a Veress needle. Dilatation and curettage was combined with the procedure in 1.24% cases. All the procedures were performed under local anaesthesia using 2% lignocaine, and sedation with 50 mg pethidine and 25 mg promethazine intravenously.

The complications encountered were evaluated.

Results

Table 1 shows the complications encountered in the present series. Operative complications occurred in 154 (109.34 per 10000) cases. The most frequent was uterine perforation with a manipulator (60.35/100000), followed by extraperitoneal insufflation (17.04/10000) and bisection of the tubes (5.02/10000).

TABLE I
Complications

Complication	No. of cases	Incidence per 10000
Uterine perforation with manipulator	85	60.35
Extraperitoneal insufflation	24	17.04
Bisection of the tubes	22	15.62
Omental prolapse	8	5.68
Mesosalpingeal haematoma	7	4.97
Slight bleeding	3	2.13
Transection of ovarian ligament	1	0.71
Bladder injury	1	0.71
Puncture of ovarian cyst	1	0.71
Incisional bleeding	1	0.71
Cardiac arrest and death	1	0.71
Total	154	109.34

There was one mortality (0.71/10000) which was not related to laparoscopic sterilization. The patient had a cardiac arrest from which she could not be resuscitated. From the history and clinical examination no cardiac lesion had been suspected. At autopsy, a myxoma was found in the left atrium causing a ball-valve type of obstruction. Bilateral pulmonary tuberculosis was also found.

In 6 (4.26/10000) patients, laparoscopic sterilization was not possible because of the following reasons. Pelvic inflammatory disease was found in 3 (2.13/10000) cases, genital tuberculosis in 1 (0,71/10000) case, an ovarian cyst in 1 (0.71/10000) case and endometriosis in 1 (0.71/10000) case.

Discussion

Like all surgical procedures, laparoscopy is associated with a risk of anaesthetic complications. This risk was greatly reduced in the present series by the use of local anaesthesia.

Uterine perforation by the manipulator was the commonest operative complication. It occurred mainly due to the inexperience of the paramedical personnel assisting the surgeons. It was seen mainly with Vitoon's uterine manipulator and never with Hulka's manipulator combining a tenaculum and a uterine sound.

Extraperineal insufflation was seen only in cases of prior induction of pneumoperitoneum with Veress needle.

Bleeding from tubal transection was seen mainly with thick, edematous or fixed tubes. All the cases were successfully managed by application of additional silastic bands over the cut ends of the tubes, and a laparotomy was not required in any case to control the bleeding.

A laparotomy was required in 1 case

for injury to the urinary bladder with trocar and cannula. This patient had not passed urine for quite a long time and her bladder was distended. The tear in the bladder was repaired with No. 3/0 chromic catgut on atraumatic needle in 2 layers. She had an uneventful recovery after continuous bladder drainage for 10 days.

Accidental puncture of a small simple serous cyst of the ovary occurred in one case. It did not require an exploration.

Both bladder injury and puncture of the ovarian cyst could have been avoided with greater vigilance during laparoscopy.

Omental prolapse occurred in 4 cases immediiately following removal of trocar and cannula and this complication did not recur once the faulty technique was corrected.

Electrocautery was not employed at all and hence there was no instance of electrothermal burns.

There was no cases reported with gross sepsis.

Conclusions

As the procedure of laparoscopic sterilization gains popularity, additional complications will be reported. However with good training, adequate experience and optimal operating conditinos, most of the complications can be avoided.

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