

# Using Laparoscopy in Uterine Tubes Surgery

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## **Abstract**

Results of using laparoscopy to treat tuboperitoneal form of infertility (104 women, group I) and to perform surgical sterilization of women (178 women, group II) are presented. Post-laparoscopy examination of those women demonstrated that fertility in group I was restored in 25.0% of cases. Analysis of the results obtained in group II demonstrated that contraceptive efficacy was 100% during the follow-up period of 2-9 years, while the nature of menstrual cycle after sterilization practically did not change.

**Keywords:** *endoscopic surgery, tuboperitoneal infertility, plastic uterine tubes, laparoscopic sterilization*

## **Introduction**

**S**urgical laparoscopy is one of the most important methods introduced into gynecological practice. Laparoscopic approach in uterine tubes surgery practically replaced other types of surgical interventions on those organs [1,2,3,4,5].

Diagnosis and management of tuboperitoneal form of female infertility as one of the most frequent causes of infertility (9.4-85%) became a priority in endosurgery of the recent 20 years [2,3]. On the other hand, laparoscopic contraception. uterine tubes sterilization is the most popular method of female contraception [1].

The goal of this study was to estimate the efficacy of laparoscopic treatment of tuboperitoneal infertility and remote results of laparoscopic sterilization of females.

## **Material and Methods**

104 patients aged 24-38 have been followed up. The patients were subjected to surgical intervention within the period from 1994 to 2000. 43 patients were suffering from primary infertility, 61 patients - from the secondary one. All patients were preoperatively subjected to echoscopic examination of small pelvis organs and hysterosalpingography in addition to routine clinical and hormonal testing. 16 patients had bilateral hydrosalpinxes, 14 had unilateral hydrosalpinx. 78 patients had commissural process of the I-II degree and 26 - of the III-IV degree (*Tab.1*), which was verified in the course of laparoscopy.

<i>Infertility</i>	<i>Number of patients</i>	<i>Degree of commissural process</i>	
		I-II	III-IV
Primary infertility	28	21	7
Secondary infertility	76	57	19
Total	104	78	26

**Tab.1** *Distribution of clinical grading of peripheral neuropathy by abnormal neurophysiologic findings*

55 patients had the past history of surgical interventions on abdominal organs. In 27 patients tubes were impotent in ampullar areas, in 77 - tubes were partially patent. According to our data the results of hystersalpingography and laparoscopy as related to the tubal potency coincided in 76 (73.1%) patients.

Laparoscopy was performed by generally accepted method using endoscopic equipment and instruments produced by "Karl Stors" firm (Germany). Visual control and video recording were performed using endoscopic videosystem of "Cabot Medical" firm (USA).

Patients were subjected to the following operations: salpingo- and salpingo-ovariolysis (77), terminal salpingoneostomy with fimbrioplasty (21), salpingoneostomy (6). Dissection of commissures was performed in a blunt and sharp way using point electrode, Reder's hook and electric scissors. Any intervention on uterine tubes aimed at restoration of their potency was started after they were tightly filled with methylene blue.

Another 178 women aged 25-43 were subjected to laparoscopic sterilization at #1 Kutaisi Maternity Hospital and Zhordania Research Institute of Human Reproduction within the period from 1992 to 1999 were also followed up. Sterilization was performed with the aim of contraception. A bipolar electrocoagulation of uterine tubes was used in 68 cases and application of silicon rings over uterine tubes was used in 110 cases. These manipulations were performed following generally accepted method under local or intravenous anesthesia.

Remote results were followed-up during 2-9 years. Contraceptive efficacy of laparoscopic sterilization have been assessed. Regularity of menstrual cycle before and after sterilization was also studied. A control group (CG) consisting of 161 females of matching age who were not using contraception and continued practicing artificial abortions was used for comparative studies. In the beginning of the study number of regular menstrual cycles in both groups was approximately similar (76.5% and 75.7% in CG).

## **Results and Discussion**

Potency of uterine tubes was restored intraoperatively in all 104 patients. No intra- or post-operative complications have been observed.

The patients were followed-up during 2 subsequent post-operative years. 101 patients subjected to tuboplasty were administered control hysterosalpingography (56) and computer kymopertubation (101). In 62 (58.9%) cases the uterine tubes were patent. According to computer kymopertubation data functional activity of uterine tubes was decreased in 38 out of 61 cases.

Subsequently 26 (25.0%) patients developed uterine pregnancy, no cases of ectopic pregnancies have been observed.

Investigation of the remote results of laparoscopic sterilization demonstrated that within the follow-up period of 2 to 9 years no pregnancies occurred. Hence the efficacy of contraception was 100%.

Analysis of the character of menstrual cycle before and 2-3 years after sterilization demonstrated that regularity of the cycle remained practically unchanged. At the same time in the control group this index decreased from 75.7 to 68.5%, which to our opinion is related to the fact that the women from the control group did not use any means of contraception, continued doing abortions and respectively developed complications causing impairment of menstrual cycle regularity.

Thus, it can be claimed that laparoscopy is a basic diagnostic and treatment method in cases of tuboperitoneal infertility, which results in restoration of childbearing function in 25% of cases.

Laparoscopic sterilization is a highly effective method of contraception and practically does not change the character of menstrual cycle in females.

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## Применение лапароскопии в хирургии маточных труб

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### Р Е З Ю М Е

Лапароскопия применялась с целью лечения тубо-перитонеальной формы бесплодия (104 женщин, I гр.) и для хирургической стерилизации женщин (178 женщин, II гр.). Обследование после лапароскопии показало в I группе восстановление фертильности в 25,0%. Анализ данных обследования второй группы показал, что контрацептивная эффективность составила 100% (период наблюдений - от 2 до 9 лет), а характер менструального цикла после стерилизации практически не изменился.

**Ключевые слова:** *эндоскопическая хирургия, тубо-перитонеальное бесплодие, лапароскопическая стерилизация*