

Study of Infertility in Females by Laparoscopy in Remote Area

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Abstract

Background: To evaluate the role of laparoscopy in diagnosis and management of problems related to infertility.

Methods: The descriptive study was conducted on 40 patients of infertility over a period of one year and nine months from April 2007 to December 2008. After complete history and examination, basic endocrinological investigations and semen analysis were done in infertile couple. Laparoscopy was done after pre - operative fitness under general anaesthesia.

Results: The average age of women was 30 years . About one third of patients were brought within 5years , another third in 10 years and remaining third more than 10 years after marriage . 82.5% case were of primary infertility ,5% secondary infertility ,and 12.5% presented with primary amenorrhoea and infertility .Tubal block was one of the major causes of infertility . Adhesionolysis was done in 7.5%cases.ATTwas given on clinical grounds in 2.5% cases. Six patients conceived after treatment with healthy outcome.

Conclusion: Infertile couple should be thoroughly investigated . Laparoscopy in infertility can be used for a definite diagnosis and treatment with good outcome.

Key Words:Primary infertility, Diagnostic laparoscopy, Tubal block.

Introduction

Primary infertility is the absence of preceding pregnancy and secondary infertility exists when there has been a preceding pregnancy, irrespective of outcome¹.The incidence of infertility in any community varies between 5% and 15%.The female factors contribute the most 40-50% in the etiologies of infertility followed by male factors in 30-40%, both partners in 10% and unexplained in 10% . Infertility in females is caused by various factors.

The ability to see inside the abdominal and pelvic cavity via stainless tube containing a series of optic lenses has changed the practice of gynaecology and taken much of guesswork out of the diagnostic process. Diagnostic laparoscopy provides direct visual access to the inner pelvic anatomy without

major abdominal surgery so that the physiology of ovaries , fallopian tubes and uterus can be studied in detail.

Operative laparoscopy in infertility cases can correct some problems including the removal of adhesions around the fallopian tubes and, opening blocked tubes, removing ovarian cysts, surgery for endometriosis etc².

The aim of our study was to find the causes of infertility in otherwise tested normal women , to evaluate tubal morphology and patency by dye testing, and to use operative laparoscopy in some cases to correct problems avoiding unnecessary laparotomy.

Patients and Methods

The study was conducted from April 2007 to December 2008 in Jinnah hospital Mianwali The females selected could not conceive with more than three years of unprotected intercourse with adequate coitus .The infertile couples were first examined by taking detailed history, physical examination basic endocrinological investigations and semen analysis .After general examination, systemic examination and local genital examination were carried out on the patients selected

Laparoscopy was performed in post menstrual phase under general anesthesia. All the patients undergoing this procedure were investigated properly for full blood count, random blood sugar, hepatitis profile, complete urine examination, husband's semen analysis , basal body temperature, luteinizing hormone monitoring and pelvic ultrasonography. On the day of surgery patients were put on I/V fluids and given 10mg metoclopramide before induction of anaesthesia to minimize postoperative nausea or vomiting . The variables monitored in the surgery included pulse oximetry and blood pressure monitoring in general anesthesia .

The chromotubation as carried out in all cases of infertility to test the patency of tubes by using 10-15ml of 0.5% methylene blue dye under vision of laparoscope. Operative laparoscopy was done in few

cases for ovarian cystic aspiration, and for adhesionolysis.

Results

The present study showed that the maximum cases of fertility (47.5%) were in the age group of 31-35 years followed by 25% cases of infertility in age group of 25-30 years.(Table 1)

Table 1: Cases according to Age.

Age(years)	No of cases	Percentage%
20-25	5	12.5%
26-30	10	25%
31-35	19	47.5%
36-40	5	12.5%
>40	1	2.5%

Regarding the period of infertility after marriage, majority of cases were brought within 1-10 years of marriage. (Table 2).

Table 2: Duration of infertility(years)

Years	No. of cases	Percentage%
1-5	14	35%
6-10	14	35%
11-15	10	25%
16-20	2	5%

According to the presenting symptoms maximum primary infertility was in 33 out of 40 cases (82.5%). Five patients (12.5%) presented with primary amenorrhoea and 2 cases(5%) with secondary infertility.

Total duration of laparoscopy varied between 15-30 minutes (Table 3)..

Table 3: Operating Time

Time min.	Cases(40)	Percentage%
15-20	12	30
21-25	23	57.5
26-30	5	12.5

On laparoscopy, thirty five patients out of 40 (62.5%) revealed abnormal findings while the rest had normal pelvic findings. Majority of the cases of tubal blockage were without adhesions (Table 4).

Laparoscopic adhesionolysis was done in 7.5% cases. Ovarian cystic aspiration was done in 2.5% cases. ATT was given in 2.5% cases on clinical grounds. Two cases of secondary infertility conceived

within three months after laparoscopy, with healthy outcome. Three cases of unexplained primary infertility with patent tubes conceived with the controlled ovulation induction within 3-6 months, with alive and healthy baby delivery.

One patient with clinical tuberculosis was given ATT, just on completion of treatment. She conceived and had a normal healthy male baby.

Table 4: Laparoscopic findings

Operative Finding	No of cases(40)	Percentage%
Normal pelvic organs	15	37.5%
Unilateral tubal blockage	6	15%
Bilateral tubal blockage	10	25%
Tubal blockage with adhesions	3	7.5%
Small didelphys uterus	3	7.5%
Genital tract tuberculosis	1	2.5%
Fimbrial end cyst	1	2.5%
Ovarian cyst	1	2.5%
Fibroid uterus (<2cm)	1	2.5%

Discussion

In our study 33 patients had primary infertility and 2 secondary infertility among 40 selected cases. A study conducted at Sheikh Zayed Hospital Lahore showed 25 with primary, 18 with secondary infertility among 43 cases². The women were between 20-42 years of age. In a study by Daniilidis et al³, women were between 18-45 years. In our study group, 62.5% patients showed abnormal pelvic findings which is comparable to 70% abnormal findings in a study by Kanal. in India⁴. Tubal blockage was found to be the most common cause of infertility (47.5%) followed by pelvic adhesions (7.5%). Cystic ovaries uterine myoma, genital tuberculosis and hypoplastic uterus were also seen. These findings were similar to the study conducted in Thailand by Sinawat et al.⁵. Laparoscopic adhesionolysis was done in 7.5% cases.

In our study 37.5% patients were diagnosed as unexplained infertility as compared to 42.4% in a study by Kanda et al.⁶. The effective period after laparoscopy appears to be six months. Pregnancy rates in present study after laparoscopy was 15%. For the case of unexplained infertility success rate was 40% as compared to 56.4% success rate of Kanda et al.⁶

Laparoscopy with hysterosalpingography is gold standard method to reveal tubal pathology. Recent studies showed that the hysterosalpingo contrast sonography is cost effective as compared to the diagnostic laparoscopy for tubal patency assessment in infertility cases^{7,8}.

Conclusion

Laparoscopy is very effective in evaluating cases of infertility. Laparoscopy and dye test is the gold standard method to check Fallopian tubes, particularly in high risk patients and women with history of pelvic infection. Laparoscopy can be minimally invasive and can improve chances of conception, by adhesionolysis, ovarian cystic aspiration and treating endometriosis. Following laparoscopy, patients are generally able to return home on day of surgery and recover more quickly than major surgery.

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