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INFERTILE FEMALE;
LAPAROSCOPIC EVALUATION

DR. WASEEM TALIB, MCPS, FCPS
Assistant Professor
Sheikh Zayed Hospital,
Federal Postgraduate Medical Institute,
Lahore.

DR. MAIMOONA HAFEEZ, FCPS
Associate Professor
Sheikh Zayed Hospital,
Federal Postgraduate Medical Institute,
Lahore.

DR. MOHAMMAD IKRAM, MCPS, FCPS
Sheikh Zayed Hospital,
Federal Postgraduate Medical Institute,
Lahore.

Prof. Mohammad Saeed FRCOG
Shaikh Zayed Hospital,
Federal Postgraduate Medical Institute
Lahore.

ABSTRACT... waseetalib2002@hotmail.com **Objective:** To highlight the role of laparoscopy in the diagnosis and management of problems related to infertility. **Design:** Retrospective, descriptive study. **Place & Duration:** Department of Obstetrics & Gynaecology, Shaikh Zayed Hospital, Federal Postgraduate Medical Institute, Lahore between 1st January 2003 to December 2003. **Patients & Methods:** Forty three women were selected for laparoscopy, 25 having primary infertility and 18 having secondary infertility. **Results:** Laparoscopy diagnosed significant number of previously undiagnosed (unexplained) cases. In laparoscopy multiple procedures like laparoscopic ovarian diathermy, adhesiolysis, cauterization of endometriotic spots, and removal of endometriomas, salpingostomy and cauterization of fibroids can be performed in women with primary as well as secondary infertility while having minimal complications, short hospital stay and no mortality. **Conclusion:** Laparoscopy is a valuable diagnostic tool for female infertility. Laparoscopy is less invasive and more convenient.

Key words : Infertility, primary infertility, secondary infertility, laparoscopy.

INTRODUCTION

Infertility is best defined as the inability to conceive after 18 months of unprotected intercourse[1]. Round 60-80 million couples all over the world suffer from infertility[2]. 25-40% of cases of infertility are attributed to male factor[3]. In female infertility, untreated infections (frequently linked to pelvic inflammatory disease), anovulation and endometriosis are major causes in our social setup. As most of our patients are illiterate and from low socio-economic class, they usually go to

"Hakeems" and "Dais" for treatment of their infertility which leads to further worsening and delay in their proper management.

In this scenario, the role and place for a newer and high tech method like laparoscopy needs to be adequately established, so that it is neither overused, nor the patients who can really benefit from it, are deprived of it.

The traditional way to assess the uterine cavity, tubal structure and tubal patency was hysterosalpingography but it has now been largely replaced by laparoscopy and hysteroscopy. Laparoscopy can identify pelvic disease in about 50% patients of infertility with a normal hysterosalpingogram[4].

The main objective of this study was to highlight the role of laparoscopy in establishing the diagnosis and management of female infertility.

PATIENTS & METHODS

Inclusion Criteria

Infertile patients with following indication were offered laparoscopy

1. Clinical endometriosis
2. Polycystic ovarian syndrome not responding to medical treatment
3. Abnormal hysterosalpingogram
4. A tubal factor is suspected
5. Unexplained infertility
6. Mullarian abnormality
7. Second look laparoscopy

Exclusion Criteria

Patients with medical disorders which are a contraindication for laparoscopy were excluded.

Records of these patients were obtained both from outpatient and in-patient department and following parameters were recorded on which results of the study would base.

1. Age
2. Age of menarche
3. Age of marriage
4. Duration of infertility
5. Associated signs and symptoms
6. Previous history of any abdomino-pelvic surgery
7. Provisional/ clinical diagnosis
8. Intraoperative laparoscopic findings
9. Laparoscopic procedure
10. Postoperative complications

Operation was scheduled usually in proliferative phase of menstrual cycle. Patients were admitted one day prior to surgery. Apart from complete history and general physical examination, complete blood examination, complete urine examination and random blood glucose level were performed. ECG and chest x-ray were performed if required for pre-anaesthesia evaluation.

RESULTS

43 women were selected for laparoscopy out of 154 infertile patients presented during the period of study. 25 (58.1%) were in primary infertility group and 18 (41.9%) in secondary infertility group. The mean duration of infertility was 6.1 years and 4.3 years respectively. Mean age at presentation was 27.4 years and 29.8 years in primary and secondary infertility groups respectively.

In primary infertility group main associated symptoms were dysmenorrhoea (48%), dysparunia (36%), irregular cycle (20%) and hirsutism (8%) while 64% patients in this group showed no signs on examination, however 16% had nodularity in pouch of Douglas and 8% had retroverted uterus and adnexal mass each.

In secondary infertility group only 22% had dysmenorrhoea and 16.6% had dysparunia, other less common symptoms were irregular cycles, secondary amenorrhoea, hirsutism, excessive weight gain, lower abdominal pain and foul smelling vaginal discharge (11.1% each).

In this group there were no signs in 50% of women, 16.6% patients were having retroverted uterus and 11.1% were having bulky uterus and adnexal mass each. 72.2% of women with secondary infertility had history of

previous abdomino-pelvic surgery i.e. dilatation and curettage (50%), laparoscopy (33.3%), LSCS (16.6%) and laparotomy (11.1%). While only 28% of patients with primary infertility had history of such surgeries.

Common findings in primary infertility patients were polycystic ovaries (48%), peritubal adhesions (44%), endometriotic spots (28%), periadnexal adhesions (36%), bilateral tubal block (24%), obliterated pouch of Douglas (16%), fibroids and unilateral tubal block (12% each). While in secondary infertility common findings were PCO (66.6%), peritubal adhesions (50%), periadnexal adhesions (49.4%), endometriotic spots (27.7%), bilateral tubal block (27.7%), fibroids (33%), obliterated POD, simple cyst and hydrosalpinx (11.1%).

The common procedures performed laparscopically in primary infertility were laparoscopic ovarian diathermy 56%, adhesiolysis 52%, cauterization of endometriotic spots 28%, and salpnigostomy 16%. While in the secondary infertility group common procedures were laparoscopic ovarian diathermy 77.7%, adhesiolysis 33.3%, cauterization of endometriotic spots 27.7% and salpingostomy 16.6%.

There were no complications in 80% and 61% patients of primary and secondary infertility groups respectively. The complications which were recorded were pyrexia, abdominal discomfort, pain right shoulder and vomiting and none of these were more than mild.

Mean hospital stay was 1.7 days in primary infertility and 2.5 days in the secondary infertility group.

DISCUSSION

Statistics regarding infertility in general population are difficult to come by since 40% of infertile couples do not attend a hospital or clinic for treatment illustrating the potential for error in hospital based statistics[5].

Studies conducted in hospitals of Rawalpindi and Faisalabad showed 62% and 58.1% patients in primary infertility group and 38% and 41.9% patients in secondary infertility groups respectively[6,7]. While in a community based study the primary infertility occurs among only 2-4% of women up to age of 44 years[2].

The mean age at presentation in study at Rawalpindi was 22.1 years in primary infertility and 29.4 years in secondary infertility group[6].

In present study major symptoms were dysmenorrhoea, dysparunia and irregular cycle which are found to be frequently associated with organic pelvic pathology in other studies as well[8].

Previous surgery, especially of pelvic region was found to be associated with significant adhesion formation and more so in secondary infertility which is similar to findings of Usmani[6].

Co-existing polycystic ovarian disease and endometriosis were found in 11.6% patients. This co-existence has been found in other studies as well[9,10] in 7-8% patients.

Laparoscopy diagnosed 7 out of 9 cases of unexplained infertility and such usefulness of laparoscopy as diagnostic tool has been found in an other study by Semely's[11].

The most commonly found pathologies were endometriosis, polycystic ovarian disease, adhesions and tubal blockage. Malinowski and colleagues in a Polish study found the same order of frequency of these findings on laparoscopies for the diagnosis of female infertility[12].

The occurrence of polycystic ovarian disease was reported around 33% by Usmani[6] and 28% by Malinowski and colleagues while it is 40 and 50% in primary and secondary infertility respectively and supported by other studies[13,14]. This difference may be due to different diagnostic criteria and population characteristics.

The presumption that endometriosis is uncommon in Asian women is found to erroneous in present study and supported in other local studies at Faisalabad and

Lahore[7,15].

Garry et al[16] in his study concluded that meaningful improvements in clinical symptoms of quality of life can be obtained by laparoscopic excision of endometriosis and endometriomas with acceptable levels of operative morbidity.

About 50% patients of both groups underwent adhesiolysis of pelvic adhesions and salpingostomy which is also found to be a useful and effective procedure for infertile couple[17,18].

The incidence of postoperative complications with laparoscopy is very low which corresponds with the findings of few other national and international studies[6,19,20,21].

CONCLUSION

Laparoscopic procedure is less invasive, more convenient and more precise for diagnosis as well as for minor procedures which were previously being performed by laparotomy like ovarian diathermy adhesiolysis, cauterization of endometriotic spots, removal of endometrioma, cystectomy, salpingostomy. Mortality is zero with laparoscopy.

There is need to establish the role of laparoscopy in both the diagnosis and management of patients with infertility and larger studies need to be carried out.

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