

Frequency of Various Laparoscopic Diagnostic Findings in Subfertile Women

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Abstract

Objective: To determine the frequency of various types of pelvic pathologies likely to be causing subfertility.

Study Design: Descriptive study.

Study Setting: Department of Obstetrics and Gynaecology unit III, Nishtar Hospital Multan, from 1 September 2010 to 31 August 2011.

Methodology: A total of 100 subfertile women were included in the study. Each patient selected for laparoscopy was reviewed in outpatient clinic. A detailed history was taken and thorough clinical examination was done. Necessary investigations like haemoglobin, blood grouping, urine analysis, ultrasonography, cervical smear cytology, husband's semen analysis and others, as indicated by the clinical situation were carried out. Patients fit for laparoscopy were admitted a day before the procedure.

Results: Most of the subfertile patients 31 (31%) had normal pelvic findings, 30 (30%) patients had polycystic ovaries (PCO) and pelvic adhesions were found in 27 (27%) patients. Endometriosis and fibroids were found in 6 (6%) patients and 5 (5%) respectively. Congenital anomaly was observed in 1 (1%) patient, it was a bicornuate uterus. Combination of various pathologies was also seen and the most common was PCO and pelvic adhesions in 15 (15%) patients.

Conclusion: Majority of subfertile women had normal pelvic findings. Polycystic ovaries, pelvic adhesions and endometriosis could be common causative factors of subfertility.

Key words: Diagnostic laparoscopy, Subfertility, Normal pelvis.

Introduction

Subfertility is defined as failure to conceive spontaneously following regular unprotected intercourse for 12 months.¹ It may be primary when a woman has

never conceived or secondary when she has conceived irrespective of the outcome.² About 80% couples achieve spontaneous pregnancy by the end of 12 months following an unprotected intercourse and this figure reaches up to 90% by the end of 18

months. Hence most of the clinicians justifiably defer investigations and treatment for 1 year, if no apparent problem is observed in the couple. Following an understandable reassurance and counseling, all that is needed 'wait and see' policy.

There are various identifiable causes for subfertility including male factors, female factors and combined male and female factors. Almost 43.5% of the couples are labeled as having unexplained subfertility.³ Approximately 1/4th (24%) of the subfertile couples have only male factors which include abnormal semen analysis and psychosexual problems like impotence and premature ejaculation etc. Female causes may be anatomical or physiological. Anatomical causes include abnormal tubal architecture (14%), endometriosis (6%), pelvic adhesions and sometimes congenital defects.⁴

Tubal factors account for 36.5% of cases and can be congenital or acquired. Congenital causes include under-developed tubes, tubal diverticula or problems with tubal mucosa and cilia. Acquired causes include infections (Chlamydia, tuberculosis, and gonococcus) which can cause external as well as internal tubal damage. Pelvic surgery can adversely affect anatomical relations as a result of adhesion formation. Endometriosis is another distressing problem which badly disturbs the anatomy in severe cases.⁵

Anatomical causes regarding the ovary include adhesions between the ovary, tubes and peritoneum. These adhesions can follow infection, surgery and endometriosis. Other diseases of ovaries are ovarian endometriosis and polycystic ovarian syndrome(PCOS).⁶ Congenital anomalies include bicornuate uterus subseptate uterus, rudimentary horn of the uterus, uterus, didelphys and tubal anomalies.⁴The objective of the study was to determine the

frequency of various types of pelvic pathologies likely to be causing subfertility.

Methodology

A total of 100 subfertile women were included in the study after taking the permission from the hospital ethical committee. The patients were selected in the outpatient clinic by purposive sampling. Each patient selected for laparoscopy was reviewed in the outpatient clinic. A detailed history and thorough clinical examination were carried out. Necessary investigations including haemoglobin, blood grouping, urine analysis, ultrasonography, cervical smear cytology, husband's semen analysis and others as indicated by the clinical situation were done. Patients fit for laparoscopy were admitted a day before the procedure. Counseling; regarding the procedure, expected benefits and likely complications; was done. **Informed written consent was taken from every patient.** Laparoscopy was performed under general anaesthesia in lithotomy position with 15 degree-Trendelenberg tilt.

Results

A total of 100 patients visited the gynaecology outpatient clinic during the study period with the complaint of subfertility. They were admitted in the ward for diagnostic laparoscopy. Sixty one patients had primary infertility and 39 had secondary infertility. Detailed results are shown in tables I-III.

Table I. Duration of subfertility (n=100)

Duration (years) subfertility	No. of patients	%age
2-3	39	39.0
4-5	28	28.0
6-7	18	18.0
> 7 years	15	15.0

Table II. Laparoscopic Findings (n=100)

Finding	No. of patients	%age
Polycystic ovaries	30	30.0
Pelvic adhesions	27	27.0
Endometriosis	06	06.0
Fibroids	05	05.0
Congenital anomalies	01	01.0
Normal pelvis	31	31.0

Table III. Combination of various findings

Finding	No. of patients	%age
Polycystic ovaries + pelvic adhesions	15	15.0
Endometriosis + adhesions	04	04.0
Endometriosis + polycystic ovaries	02	02.0
Fibroids + adhesions	02	02.0

Discussion

Subfertility remains to be a common social, psychological and a health problem. It is neither life threatening nor a cause of ill health and yet it leads to considerable personal suffering and disruption of family life. The incidence is almost 10-15%.⁷ Duration of subfertility is very important regarding the institution of investigations and treatment. We found most of the patients in present study with less than 5 years of subfertility (67%) while 15% of the patients had this problem for more than 7 years.

There is dearth of knowledge regarding Pakistani women's perception and treatment seeking behavior for subfertility. A study was done to expose the contextual factors that influence the health seeking be-

havior of infertile women in lower socio-economic group. Reason reported for seeking treatment for primary subfertility was the feeling of carrying on the family name and yet feeling alone. Women suffering from secondary subfertility were seeking treatment because they did not have any male offspring. Most of the women initially sought treatment within first two years of marriage. Infertility is usually treated as a clinical disease by health care providers without considering its social ramifications.⁸

Age is an important factor for fertility outcome. With growing age the chances of conception decrease as the number of follicles in the ovaries decrease.⁹ In the present study 65 (65%) patients were less than 30 years of age while 35 (35%) were more than 30 years old. Primary subfertility was found in 61 (61%) patients while 39 (39%) had secondary subfertility.

Clinical examination is very important as it usually guides for suitable investigations. There were findings suggestive of PCO in 28 (28%) patients while 19 (19%) had signs and symptoms suggestive of pelvic adhesions and in only 2 (2%) they were pointing towards endometriosis. While the results of other studies showed 20% subfertile patients having symptoms suggestive of polycystic ovaries which is almost in accordance to results of present study.¹⁰

The advent of laparoscopy had provided a panoramic view of the female pelvic organs.¹¹ Gynaecologists have long used the laparoscope for diagnostic and operative procedures such as tubal occlusion. The improved resolution and quality of modern systems provides superior images and thus facilitates more precise and accurate diagnosis.¹² Normal pelvic findings were found in 31 (31%) patients. Nazir et al in their study reported 53% of patients with subfertility having normal findings.¹³

In our present study polycystic ovaries, which on visual inspection appear as glistening pearly white ovaries with thick capsule, were seen in 30 cases (30%) which is almost the same as observed by Zoinierezyk et al in 32%.¹⁴

In another study polycystic ovaries were seen in 7% Pakistani women.¹⁵ The second commonest finding in our study was of pelvic adhesions in 27%. In a study pelvic adhesions were found in 20% of cases and 23.6% of cases in another study.^{16,17} Pelvic tuberculosis, PID and previous pelvic surgery are important risk factors for adhesions. All precautions must be taken to avoid infection and adhesion formation when pelvic surgery is performed.¹⁴

There is a very high association between endometriosis and subfertility and laparoscopy allows the visualization of the various lesions of pelvic endometriosis. Endometriosis was found in 6 (6%) patients of our study while Naziret al¹³ reported 15% cases of endometriosis. Five percent of our patients were found to have fibroids mostly sub serosal which is similar to the findings of Nazir et al, who gave the figure of 4.5%.¹³ On the whole, in the present study 69(69%) women had pelvic pathology detected on laparoscopy. While 31 (31%) had normal pelvic findings. Pelvic pathology is reported in 80% of subfertile cases, by another worker.¹⁸

Conclusions

Subfertility remains to be a common social, psychological and health problem. Laparoscopy is an invaluable technique and is a mandatory procedure for complete assessment of female subfertility. It alone provides a lot of information regarding tubal status, pelvic adhesions, ovarian status and uterine pathol-

ogy. Majority of sub fertile women have normal pelvic findings. Polycystic ovaries, pelvic adhesions and endometriosis could be common causative factors of subfertility.

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Its worth remembering that no one is Infallible But we all must try our best.

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