

Laparoscopic Findings in Patients with Secondary Infertility

Shamim Akhtar^{1*}, Zill E Huma², Naila Nasr Malik³, Humaira Bibi¹,
Asma Amin Baig⁴ and Shazia Zulfiqar⁵

¹Assistant Professor, Obstetrics and Gynaecology, Kuwait Teaching Hospital, Peshawar Medical College, Riphah International University, Pakistan

²Associate Professor, Obstetrics and Gynaecology, Amna Inayat Medical College, Lahore, Pakistan

³Associate Professor, Obstetrics and Gynaecology, Kuwait Teaching Hospital, Peshawar Medical College, Riphah International University, Pakistan

⁴Assistant Professor, Arif Memorial Hosp, Lahore, Pakistan

⁵Senior Registrar, Gynaecology Department, Shalamar Medical and Dental College, Lahore, Pakistan

***Corresponding Author:** Shamim Akhtar, Assistant Professor, Obstetrics and Gynaecology, Kuwait Teaching Hospital, Peshawar Medical College, Riphah International University, Pakistan.

DOI: 10.31080/ASMS.2022.06.1288

Received: April 26, 2022

Published: May 12, 2022

© All rights are reserved by **Shamim Akhtar, et al.**

Abstract

Objective: To see the common findings in diagnostic laparoscopy in patients with secondary infertility.

Place and Duration: This is a retrospective cross sectional study of 70 patients with secondary infertility. Diagnostic laparoscopies were performed at Health care center (pvt) Ltd, Peshawar from July 2020 to September 2021.

Background: Infertility is very painful condition. It causes psychological stress, social disgrace and affects quality of life of a couple. In Pakistan prevalence of infertility is 22%. Secondary infertility contributes its major proportion. There are different causes of it. In majority of cases it is because of some pelvic pathology. Diagnostic Laparoscopy is a good tool for diagnosing and treating the pelvic pathologies.

Material and Methods: Laparoscopy was performed after taking informed consent of all patients who had at least previous one confirmed pregnancy irrespective of outcome and had normal semen analysis. Females with midline abdominal scar were excluded. Pelvic findings were noted. Percentages, frequencies of findings and mean for age were calculated. Data Analysis was done on SPSS.

Results: In this study laparoscopy was done in 70 patients with secondary infertility. Mean age of presentation was 29.1 yrs and mean duration of infertility 6.34 yrs. 16 patients had tubal factor and 10 had PCO. Fibroid uterus, pelvic adhesions, endometriosis and PID were seen in 6,5,4 and 3 patients respectively. 26 patients had normal pelvic findings.

Keywords: Secondary Infertility; Tubal Disease; Laparoscopy

Introduction

Infertility is a stressful condition. It is a global problem [1]. About 10-15% couples all over the world suffer from infertility [2].

It can be primary or secondary [3]. In either case it is responsible for depression, low self esteem, social embarrassment, sexual dysfunction and disruption of marital life [4,8]. Secondary infertility

is inability to conceive after one year of regular unprotected intercourse after a previous pregnancy. Its prevalence is about 18% in Pakistan [5]. Usually primary infertility gains the main focus and secondary infertility remains the neglected area [6,9].

Secondary infertility has a profound psychological and social pressure. Mostly females are held responsible for infertility and they remain under constant threat of separation with husband or his remarry. In our society people like large family size and preference for male child. So even having one female child couples desire for further pregnancies [7]. Both male and female factors may be involved in secondary infertility but female factors are more common [3].

Tubal factor is most common in females. Genital tract infections are the main cause of tubal involvement. These infections are mainly because of poor hygiene, lack of sexual education, unhealthy practices during menstruation child birth and post partum period [10]. Use of unsafe methods during induced abortions or miscarriages are also a major source of infection [10,11]. Induced abortions have high association with secondary infertility than spontaneous miscarriages [12].

Genital tract infections cause pelvic inflammatory disease that interferes with tubal function. PID also form pelvic adhesions that further impair tubal function. Smoking and pelvic tuberculosis are also risk factors of tubal disease in developing countries [13].

Previous surgeries like laparotomy for ectopic pregnancy or ovarian cysts, LSCS, appendectomy can also contribute to infertility because of adhesions formation [14].

The evaluation of secondary infertility starts with history examination and then investigations like semen analysis of male, hormonal ultrasound of females [15].

Laparoscopy is a gold standard for evaluation of fallopian tubes, pelvic assessment and treatment of pelvic pathologies [16].

The aim of this study was to see the common pelvic pathologies with the help of laparoscopy in patients with secondary infertility.

Methodology

This retrospective cross sectional study was conducted at Health care center (pvt)Ltd, Peshawar from July 2020 to September 2021. Ethical approval was taken.

Inclusion criteria

All patients with previous at least one confirmed pregnancy (chemical or clinical) who were not lactating and not using any method of contraception.

Exclusion criteria

Patients with previous midline laparotomy scar and with male factor of infertility were excluded.

Detailed gynecologic and obstetric history was taken. Thorough GPE, systemic and pelvic examination was performed. Previous medical record was checked. Any radiological investigations like ultrasound or hysterosalpingogram was checked. Male factor of infertility was ruled out by history taking. Semen analysis report was checked. Informed consent was taken for laparoscopy. During procedure pelvis was inspected in detail for any pathology of uterus fallopian tubes or adnexa. Findings were recorded on preformed performa. Percentages, frequencies of findings and mean for age was calculated. Data analysis was done on SPSS.

Results

There were 70 patients of secondary infertility. Ratio of primary to secondary infertility was 2:1. Mean age of presentation was 29.1 yrs and mean duration after last conception was 6.34 yrs. Tubal factor was present in 16(22.9%) cases, PCO in 10(14.3%), fibroids in 6(8.7%) cases pelvic adhesions in 5(7.4%), endometriosis in 4(5.7%) and PID in 3(4.2%) patients were observed.

Duration	Number of patients	Percentage
<5 years	34	48.6%
6-10 years	25	35.7%
>10 years	11	15.7%

Table A

Age	Number of patients	Percentage
20-25 yrs	15	21.4%
26-30 yrs	34	48.6%
31-35 yrs	16	22.9%
>35 YRS	05	07.1%

Table B

Findings	Number of patients	Percentage
Normal	26	37.1%
Block tubes	10	14.3%
PID	3	4.2%
PCO	10	14.3%
Adhesions	5	7.1%
Hydrosalpinx	6	8.6%
Fibroid	6	8.6%
Endometrioses	4	5.7%

Table C

Discussion

In our study the ratio of secondary infertility to primary infertility was 2:1 that is similar to Aziz N study [16]. Comparable results were also shown by Abdelhafid [2]. This shows that secondary infertility contributes a major proportion of infertile couples. There should be a continued health education and regular assessment during reproductive years.

Mean age of presentation was 29.1yrs in this study. Similar results were shown by Wasim T [17] and Suman R [18]. Anisa K quoted a bit higher 33.3 yrs in her study [19]. This may be because of growing awareness of seeking medical help.

Mean duration of secondary infertility was 6.34 yrs. Comparable results were given by Aziz N that is 7.3 yrs [16]. There was wide variation between duration of infertility and presentation to our hosp. This may be because there is a general trend of conservative management in the hope of next spontaneous pregnancy. And secondly patients usually wander to local hakims and health workers for initial help.

In this study most of the couples presented between 2-5 yrs of last pregnancy and none was before 2 yrs. Anisa K showed the similar trend [16]. This is due to general perception that next pregnancy should be spontaneous and any delay creates anxiety in females especially if the first child is a female or ended up in miscarriage.

Tubal factor was the most common finding in our study. 16 patients (22.9%) had tubal involvement. Tubal blockage was present in 10(14.2%) and hydrosalpinx in 6(8.6%) patients. Almost

similar results were seen by Aziz N but Talat Naz found different results (33.3%) in her study [20]. Proper education on sexual health and general hygiene can further improve the outcome.

PCO was the second most common cause in 10 (14.2%) cases. In previous work by Shraddah different results (16%) were found [21]. There is a growing concern on increasing trend of PCO. Life style modification at proper time can help.

PID was seen in 3 (4.3%) patients. Different results (20%) were seen by Gulfareen. This is because patients go to Dais who do vaginal examinations and place vaginal medication with unsterilized hands that causes vaginal infections and further aggravate the situation.. Provision of health facilities in remote areas can improve this aspect [10].

Pelvic adhesions were present in 5(7.1%) cases. Geetika found pelvic adhesions in 31.7% [23]. These can be due to previous undiagnosed PID.

Fibroid uterus was present in 6(8.6%) patients that were comparable to previous work. Fibroids may be enlarged in first pregnancy and can be responsible for secondary infertility.

Endometriosis was seen in 4(5.7%) cases. Talat N showed similar results. Endometriosis is a progressive disease and can affect both primary and secondary infertility [20].

Normal pelvic findings were seen in 26(37.1%) patients. Geetika J showed 24.4% normal results [23]. These patients with unexplained infertility usually have a good prognosis.

Conclusion

Tubal factor is the major cause of secondary infertility. Genital tract infections are the most common cause of tubal factor involvement. Proper health education with special focus on sexual health and provision of health facilities can improve the outcome.

Acknowledgement

Special thanx to Dr Marghalara for helping me in data collection.

Bibliography

1. Tara M Cousineau and Alice D Domer. "Psychological Impact of Infertility". *Best Practice and Research Clinical Obstetrics and Gynecology* 21.2 (2007): 293-308.

2. Abdelhafid B., et al. "Difference between Primary and Secondary Infertility in Morocco: Frequencies and Associated Factors". *International Journal of Fertility and Sterility* 12.2 (2018): 142.
3. Melese Shenkut A., et al. "Primary and secondary infertility in Africa: systematic review with meta-analysis". *Fertility Research and Practice* 6 (2020): 1-11.
4. Javeeria Saif., et al. "Quality of life, coping strategies and physiological distress in women with primary and secondary infertility". *Nature-Nature Journal of Psychology* 8 (2021): 8-16.
5. Tazeen Saeed A., et al. "Are unhygienic practices during the menstrual, partum and post partum periods Risk factors for secondary infertility". *Journal of Health, Population and Nutrition* (2007).
6. Trisha L Raque-Bogdan and Mary Ann Hoffman. "The relationship among infertility, self-compassion, and well-being for women with primary or secondary infertility". *Psychology of Women Quarterly* 39.4 (2015): 484-496.
7. Neelofer S and Tazeen Saeed A. "Psycho-social consequences of secondary infertility in Karachi". *JPMA, The Journal of Pakistan Medical Association* 1 (2006): 19.
8. Ashraf Direkvand M., et al. *QOM University of Medical Sciences Journal* 10.16 :76-87.
9. Nathalie D., et al. "The risk factor profile of women with secondary infertility: an unmatched case-control study in Kigali, Rwanda". *BMC Women's Health* 1 (2011): 1-7.
10. WHO. Infertility: a tabulation of available data on prevalence of primary and secondary infertility (1991).
11. Anastasia T., et al. *Journal of Epidemiology and Community Health* 47.1 (1993): 36-39.
12. D Trichopoulos., et al. "Induced abortion and secondary infertility". *BJOG: An International Journal of Obstetrics and Gynecology* 83.8 (1976): 645-50.
13. Halfa A Al-Turkey. "Prevalence of primary and secondary infertility from tertiary center in eastern Saudi Arabia". *Middle East Fertility Society Journal* 20.4 (2015): 237-240.
14. P Thoneau., et al. "Risk factors in men and women consulting for infertility". *International Journal of Infertility and Menopausal Studies* 38.1 (1993): 37-43.
15. CH Davis., et al. "What is the best way to evaluate secondary infertility". *Family Physicians Inquiries network*.2007.
16. Aziz N. "Laprosopic evaluation of female factors in infertility". *Journal of College of Physicians and Surgeons of Pakistan* 20 (2010): 649-652.
17. Talib W., et al. "Infertile female: Laprosopic evaluation". *Professional Medical Journal* 14 (2007): 562-566.
18. Suman R and Rashmi B. "Determinant of infertility in couples". *Journal of the Nepal Health Research Council* 42 (2019): 85-89.
19. Anisa K., et al. "Diagnostic laparoscopy as a gold standard investigation in sub fertility". *Jounel of Fatima Jinnah Medical University* 8 (2014): 1.
20. Talat N., et al. "Laprosopic evaluation in infertility". *Journal of College of Physicians and Surgeons Pakistan* 19 (2009): 704-707.
21. Sharaddah K Shetty., et al. "Laprosopic Evaluation of Tubal Factor in Cases of infertility". *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* 2.3 (2013): 410-413.
22. Gulfareen Haider., et al. "Laprosopic Evaluation of Female Infertility". *Journal of Ayub Medical College Abbottabad* 22 (2010): 136-138.
23. Geetika Jain., et al. "Laparoscopy: As a First Line Diagnostic Tool for Infertility Evaluation". *Journal of Clinical and Diagnostic Research: JCDR* 8.10 (2014): OC01.