International Journal of Medical and Health Research
ISSN: 2454-9142; Impact Factor: RJIF 5.54
Received: 24-12-2019; Accepted: 25-01-2020
www.medicalsciencejournal.com
Volume 6; Issue 2; February 2020; Page No. 90-92

Evaluation of laparoscopic findings in females with secondary infertility in a tertiary care hospital

Dr. Umang Juneja[1], Dr. Urvashi Sharma[2*], Dr. Swati Garg[3]
[1] Resident, Department of Obstetrics and Gynaecology, Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan, India
[2] Assistant Professor, Department of Obstetrics and Gynaecology, Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan, India
[3] Professor and Head, Department of Obstetrics and Gynaecology, Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan, India
Corresponding author: **Dr. Urvashi Sharma**

Abstract
Introduction: Secondary infertility is usually defined as the inability to conceive for one year after having conceived at least once before. Globally 10–15% of the couples are infertile and the secondary infertility out numbers primary infertility. In developing countries, Secondary infertility is mostly attributed to tubal and tubo-ovarian factors. This paper presents results on various laparoscopic abnormalities associated with secondary infertility.
Methodology: A hospital based cross sectional prospective study, was conducted in the department of Obstetrics and Gynaecology, in Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan, from Jan 2019 to Nov 2019, which included 50 cases of secondary infertility undergoing diagnostic laparoscopy. Demographic data (age, area and religion) and laparoscopic findings (pelvic, uterine, tubal and ovarian abnormalities followed by chromo pertubation test) were recorded and analysed using appropriate statistical tests.
Result: The most common abnormality seen in our patients was pelvic adhesions and uterine congestion. Peritubal adhesions and inflammation was the major tubal factor responsible for secondary infertility and chromopertubation test was seen positive bilaterally in maximum patients.
Conclusion: Problem of infertility is on a rising trend. Endoscopic evaluation of the pelvic and intrauterine factors is indispensable for infertility evaluation. It helps in diagnosis as well as treatment at the same sitting.

Keywords: secondary infertility, laparoscopy

Introduction
Infertility is much investigated and widely studied subject in the field of gynaecology. The reason for this lies in the innate desire of a woman to procreate. A couple is generally considered infertile if they are unable to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse [1]. Secondary infertility is usually defined as the inability to conceive for one year after having conceived at least once before. Globally 10–15% of the couples are infertile and the secondary infertility out numbers primary infertility [2]. The epidemiology of secondary infertility is multifactorial. In developing countries, it is mostly attributed to tubal and tubo-ovarian factors. This paper presents results on various laparoscopic abnormalities associated with secondary infertility.

Methodology
A hospital based prospective cross-sectional study, was conducted in the department of Obstetrics and Gynaecology, in Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan, from Jan 2019 to Nov 2019, which included 50 cases of secondary infertility undergoing diagnostic laparoscopy.

Inclusion criteria
Patients with secondary infertility.

Exclusion criteria
contraindications to laparoscopy and/or general anaesthesia who didn't give consent A detailed history which include history of present illness, menstrual, obstetric, past (medical and surgical), family and personal history was taken which was followed by general, systemic and gynaecological examination and were posted for laparoscopy in early post menstrual period. The procedure was explained in details to the patient and a written consent was obtained. In all cases patient was counselled regarding the guarded success of the procedure and the outcome. This was further followed by giving them possible treatment options. Demographic data (age, area and religion) and laparoscopic findings (pelvic, uterine, tubal and ovarian abnormalities followed by chromo pertubation test) were recorded and analysed using appropriate statistical tests.

Observations and Results
The age of patients ranged from 21 to 38 years. The maximum patients belonged to the age group of 25 to 29 years i.e. 56%. (Figure 1)

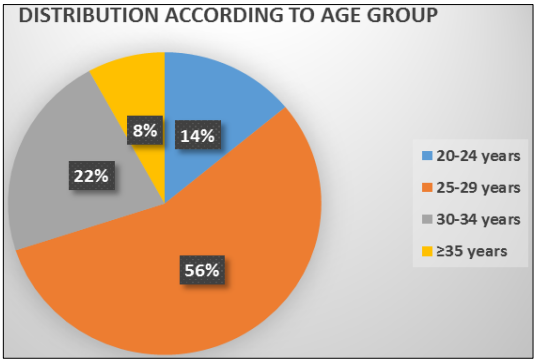

Fig 1: Distribution according to Age group

Hindu's (96%) comprised the bulk of the patients which were evaluated whereas, Muslims and others only formed 4%. (Figure 2)

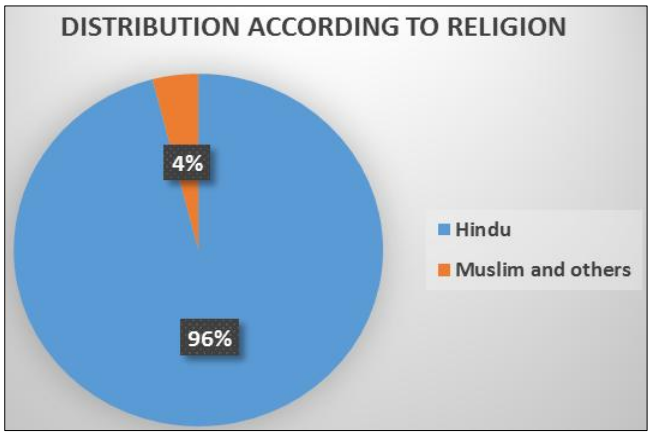

Fig 2: Distribution according to Religion

Of the 50 patients studied 82% were from rural area whereas 18% were urban. (Figure 3).

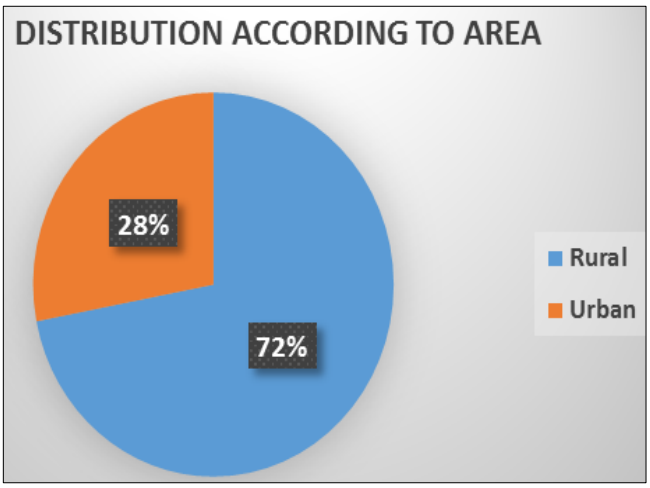

Fig 3: Distribution according to Area

Most common pelvic abnormality noted in such patients was pelvic adhesions and tubercular infections seen in 40% cases i.e. 20 out of 50 patients. (Confirmed by either AFB culture/staining or CB-NAAT) (Table 1)

Table 1: distribution according to various pelvic abnormalities

S. No	Type of Pelvic Pathology	Total no. of patients	Percentage (%)
1.	Pelvic adhesions	20	40%
2.	Tubercles	20	40%
3.	PID	14	28%
4.	Endometriosis	2	4%
5.	PCOD	4	8%
6.	Tubo-ovarian Mass	6	12%
97.	Fibroids	2	4%
8.	No abnormalities	9	18%

Uterus showed various abnormalities in the form of abnormal shape, congestion, presence of Tubercles, bulky, small uterus, Endometriosis of various degrees, fibroids etc. Congestion was seen in 44% patients and next common abnormality was presence of tubercles (36%). (Table 2)

Table 2: distribution according to uterine abnormalities

S. No	Uterine Abnormalities	Total no. of Patients	Percentage (%)
1.	Normal shape and size	14	28%
2.	Congestion	22	44%
3.	Tubercles	18	36%
4.	Bulky uterus	3	6%
5.	Small uterus	2	4%
6.	Fibroid	2	4%
7.	Endometriosis	0	0%
8.	Mullerian Anomaly	1	2%

Tubes showed various abnormalities like, inflammation, peritubal adhesion presence of tubercles, tortuous, Hydro salpinx, Beaded, Tubo-ovarian mass etc. Most common pathology was inflamed tubes seen in 38% cases. (Table 3)

Table 3: Distribution according to Tubal abnormalities

S. No	Tubal abnormalities	Total no. of patients	Percentage (%)
1.	Normal	12	24%
2.	Tubercles	10	20%
3.	Inflamed	19	38%
4.	Tortuous	5	10%
5.	Hydro salpinx	10	20%
6.	Peritubal adhesions	12	24%
7.	Tubo-ovarian Mass	6	12%
8.	Long	2	4%

9.	Endometriosis	0	0%

Ovaries showed various pathologies in the form of simple cyst, TO mass, PCOD, para-ovarian adhesions, chocolate cyst and endometriosis of various degrees.

64% did not show any abnormality while most common abnormalities were TO mass (12%) & Paraovarion adhesions (12%). (Table 4)

Table 4: Distribution according to ovarian abnormalities

S. No	Ovarian abnormalities	Total no. of patients	Percentage (%)
1.	Normal	32	64%
2.	PCOD	4	8%
3.	Tubo-Ovarian Mass	6	12%
4.	Paraovarian Mass	6	12%
5.	Endometriosis	4	8%

68% showed bilateral free spill on chromopertubation while 32% patients did not show free spill either unilaterally (8%) or bilaterally (24%). (Table 5)

Table 5: Distribution according to CPT

S. No	CPT	Total no. of patients	Percentage (%)
1.	B/L CPT positive	34	68%
2.	Negative in right side	2	4%
3.	Negative in left side	2	4%
4.	B/L negative	12	24%
	Total	50	

Discussion

We observed various abnormalities on laparoscopy but TB along with other causes of PID was mainly attributed to infertility. Various findings were presence of tubercles on tubes, peritoneum, uterus, gut and endometrium, caseation granuloma, adhesions, beaded tube, blocked tube, hydro salpinx, TO mass, pelvic congestion and fluid in peritoneal cavity which were further confirmed by either AFB staining/culture or CB-NAAT. The incidence of genital tuberculosis in India is 19% [3]. Female genital TB is typically understood as a disease of young women with 80-90% of cases diagnosed in a patient of 20-40 years old [4]. Data from industrialised countries indicate that 10-40% of women with untreated chlamydial or gonococcal infection develop symptomatic PID and that up to one quarter of these with PID will become infertile [5, 6]. In the pre antibiotic era the post PID infertility rates were as high as 60-70% [7]. 8% women develop infertility after one episode of laparoscopically proven PID. The figure rises to 40% after 3 episodes [8].

In our study, all the stages of endometriosis were seen ranging from mild, moderate to severe. The commonest site was found to be the ovaries, uterosacral ligaments and POD. Kichukova D *et al*. in 2005 established endometriosis is an unexpected finding during laparoscopy on sterile women [9]. His study was retrospective and included 20 years period of time (1976-1996) 912 patients were evaluated on whom laparoscopy was performed. Cases with endometriosis were 25%. He concluded that diagnosis of endometriosis by laparoscopy effectively helps in further treatment of sterile women. PCOS is a well-established cause of infertility as it affects ovulation. According to Seow KM in Jan 2008 stated that PCOS is the most common cause of chronic anovulation [10].

Conclusion

Problem of infertility is on a rising trend. Endoscopic evaluation of the pelvic and intrauterine factors is indispensable for infertility evaluation. It helps in diagnosis as well as treatment at the same sitting. Laparoscopy is an invaluable diagnostic tool especially for symptomatic patients and should be used early in their diagnostic infertility work-up.

References

1. World Health Organization (WHO). Challenges in reproductive health research: Biennial Report, 1994.
2. WHO. Infertility: a tabulation of available data on prevalence of primary and secondary infertility, 1991. Available: http://whqlibdoc.who.int/hq/1991/WHO_MCH_91.9.pdf. Accessed 2012 Apr 8.
3. Varma TR. Genital tuberculosis and subsequent fertility. Int J Gynaecol obstet. 1991; 1(35):1-11.
4. Schaefer, George. Female genital tuberculosis. Clin obstet and Gynaecol. 1976; 19:233-39.
5. Westrom L. Incidence, prevalence and trends of acute pelvic inflammatory disease and its consequences in industrialized countries. Am J Obstet Gynaecol. 1980; 138:380-392.
6. Platt R, Rice PA, McCormack WM. Risk of acquiring gonorrhoea and prevalence of abnormal adnexal findings among women recently exposed to gonorrhoea JAMA. 1983; 250:3205-3209.
7. Westrom L, Mardh PA. Salpingitis In: Holmes KK, Mardh P-A, Sparling PF, eds. Sexually transmitted disease. New York: McGraw Hill. 1984. 615-632.
8. Westrom LV, Joesoef R, Reynolds G, Thomson SE. Pelvic inflammatory disease and fertility. A cohort study of 1844 women with laparoscopically verified disease and 657 control women with normal laparoscopic results. Sex Trans Dis. 1992; 19:185-192.
9. Kichukova D, Uchikova E, Velevski V. Endometriosis as and unexpected finding during laparoscopy on sterile women. Department of Obstetrics and Gynaecology, High Medical, Plovdiv. 2000; 39(3):25-6.
10. Seow KM, Juan CC, Hwang JL, Ho LT. Laparoscopic surgery in polycystic ovary syndrome: reproductive and metabolic effects. Seminar Reproductive Medicine. 2008; 26(1):101-10