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Laparoscopic Observations in Infertile Females

Authors
Shuchi Jain[1], Shivi Jain[2*], Madhu Jain[3]
[1]Assistant Professor in Obstetrics and Gynaecology, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005
Email: *shuchi.gyno81@gmail.com*, Mob. 9453048789
[2]Assistant Professor, Department of Radiodiagnosis and Imaging, Institute of Medical Sciences, Banaras Hindu University, Varanasi
[3]Professor in Obstetrics and Gynaecology, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, India
Email: *drmadhujainbhu@gmail.com*, Mob: 9415302988
*Corresponding Author
Shivi Jain
Assistant Professor, Department of Radiodiagnosis and Imaging, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India
Email: *shivijain1103@gmail.com*

Abstract
Introduction and Objective: *Inability to conceive bears a social stigma and repercussions. The objective of the present study was to find out the different causes of female infertility with diagnostic laparoscopy in both primary and secondary fertility.*
Methods: *50 infertile women, 30 with primary and 20 with secondary infertility underwent diagnostic laparoscopy after written informed consent and after initial hysterosalpingography and sonosalpingography. Those not living together for 1 year with regular intercourse were excluded from the study. Those with absolute or relative contraindications for undergoing laparoscopy such as cardiovascular or respiratory disease, intestinal obstruction or hernia were also not included.*
Result: *Nothing abnormal was observed in 8 of primary and 3 of secondary infertility patients. Tubal block, pelvic adhesions, and Polycystic ovary (PCOD) were more frequent in primary and tubal block, PCOD, and pelvic adhesions in secondary infertility.*
Conclusion: *Tubal block, pelvic adhesions and Polycystic ovary are common causes of infertility. Diagnostic laparoscopy should be included for evaluation of long term infertility.*
Keywords: *Primary infertility, Secondary infertility, Laparoscopic evaluation.*

Introduction

Inability to conceive leads to personal sufferings. The overall incidence of primary infertility in India according to World Health Organization is 3.9- 16.8%, with female factor infertility responsible in about 40-55% of cases, male factor in 30-40%, both in 10% and unexplained in 10%.[1] Laparoscopy is an established way of diagnosing tubo-ovarian pathology, and peritoneal factor and therefore should be carried out in all infertility

cases especially in those with unexplained infertility.

Materials and Methods: Fifty infertile women (30 with primary and 20 with secondary infertility) underwent diagnostic laparoscopy following positive findings on hysterosalpingography and sonosalpingography in a tertiary teaching hospital after written informed consent under general anaesthesia in early proliferative phase and the pelvic viscera such as uterus, ovaries, fallopian tubes, broad ligament, utero-scaral pouch and pouch of Douglas were thoroughly examined and were looked for masses, adhesions, fluid collection, and endometriotic deposits. Tubal patency with 10-15 ml of autoclaved methylene blue dye was also evaluated. Dilatation and curettage was done in those with menstrual abnormality and the specimen sent for histopathology. Couples with less than 12 months of regular intercourse, those with male factor infertility and absolute or relative contraindication for laparoscopy were excluded from the study.

Results

Maximum number of the patients with primary infertility presented in 21-25 years and with secondary in 26-30 and 31-35 years of age. Twenty five women (83.33%) with primary infertility reported within 1-4 years, four (13.33%) between 5-8 years and one at 9-12 years of marriage as compared to 12 (60%), 5 (25%) and 3 (15%) with secondary infertility who sought medical aid in respective time period (Table, 1).

Eight women (26.66%) with primary and three (15%) with secondary infertility had no visible abnormality. The tubal block, polycystic ovary and the pelvic adhesions (including one with tubercles) were noted in 5 cases each (16.66%) and fibroid and hydrosalpinx in 2 cases each (6.66%) among primary infertility patients. Endometriosis, unicornuate uterus and dermoid cyst were come across in one patient each (3.33%, Table 2). In the secondary infertility group, tubal block was seen in 7 (35%), Polycystic ovary and fibroid in 3 (15%), and pelvic adhesions and Endometriosis in 2 each (10%, Table 2).

Table 1 Age of Infertile patients and duration of infertility

Characteristics	**Primary infertility(30)**		**Secondary infertility(20)**	
Age (Years)	Number	%	Number	%
21-25	12	40	0	
26-30	8	26.66	8	40
30-35	6	20	8	40
>35	4	13.33	4	20
Duration of married life (Years)				
1-4	25	83.33	12	60
5-8	4	13.33	5	25
9-12	1	3.33	3	15
Total	30	100	20	100

Table 2 Laparoscopic findings in infertile women

Findings	**Primary infertility n=30**		**Secondary infertility n=20**		**Total %**
	Number	%	Number	%	
Normal	8	26.66	3	15	41.66
Tubal Block	5	22.72	7	41.17	63.89
Hydrosalpinx	2	9.09	--	--	9.09
PCOD	5	22.72	3	17.64	40.36
Dermoid cyst	1	4.54	-	-	4.54
Fibroid Uterus	2	9.09	3	17.64	26.73
Unicornuate Uterus	1	4.54	-	-	4.54
Endometriosis	1	4.54	2	11.76	16.30
Pelvic tuberculosis (tubercles)	1	4.54	-	-	4.54
Pelvic Adhesions	4	18.18	2	11.76	29.94

Discussion

Infertility has always been a curse for married couples in Indian society. It is all the more distressing for those suffering from the primary one. Laparoscopy plays a crucial role in the diagnostic evaluation of such patients. Although, it is not done in the early phase of evaluation of female infertility, it should be definitely carried out following positive findings on hysterosal-pingography and or sonosalpingography, or for long standing infertility. Despite the increasing incidence of primary form as reported by Sridhar and Rambabu (78%)[2], and Chaitra et al (70%)[3], only 60% of our patients accounted for it. High incidence of secondary infertility in our patients was not totally unexpected as the majority of the patients coming to government hospital come from lower socioeconomic status and might indicate poor obstetric care at the time of previous delivery. 40% of the patients with primary infertility were of 21-25 years age and 46.6 % of 26-35 years of age indicating late marriage among female population with changing social norms. On the other hand, 80% of the patients with secondary infertility presented in 26-35 years of age group. Others reported mean age of presentation in 21-25 years for primary and 26-30 years for secondary infertility.[3]In the study by Sridhar and Rambabu, the mean age of presentation for primary infertility was 25 years and for secondary, 33 years. Generally, a 35 years old woman is consid-ered to be of advanced reproductive age (Elderly Primi)[4] and should be referred to a tertiary care set-up early for investigation and treatment. The majority of our patients reported within 5 years of primary or secondary infertility as also found by them.[2] This reflects the common desire and anxiety to have children among couples whether suffering from primary or secondary infertility.

Laparoscopy as a diagnostic tool in management of infertile women plays an undisputed role and may turn out to be therapeutic in some situations such as in presence of pelvic adhesions. Beyond doubt, laparoscopy is a standard diagnostic procedure in infertile women and also provides an opportunity for histopathological confirmation of diseases such as tuberculosis and endometriosis. It should be given a serious consideration to carry out even if the hysterosalpigography fails to detect an abnormality. It is difficult to arrive at true incidence of infertility as many women prefer to seek medical aid in a corporate hospital.

Laparoscopy in our infertile women did not detect any abnormality in 8 patients (26.66%) with primary and in 3 (15%) with secondary infertility. Normal pelvic findings were also reported by others in 28.5% of primary and 20% of secondary infertility patients.[3] Sridhar and Rambabu did not observe any abnormality on laparoscopy in about 15% of primary and 18% of secondary infertility. Thus, negative laparoscopy is more likely to be seen in women with primary than with secondary infertility. Tubal occlusion has been found to be most common pathological finding on laparoscopy irrespective of primary or secondary infertility as also reported by others.[2,3] Tubal blockage on laparoscopy may be further confirmed by chromotubation with methylene blue. Tubal occlusion was observed in 16.66% of women with primary and 35% of secondary infertility in our patients as compared to 29.48% and 31.81% reported by Sridhar and Rambabu[2] and 28.5% and 33.33% respectively by Chaitra et al.[3] High incidence of tubal occlusion among our poor patients indicates poor obstetric care and episodes of pelvic inflammatory disease. Higher incidence of tubal blockage, mainly as a result of pelvic infection or surgery, in secondary infertility patients was thus a common feature in all the three studies compared. It is important to realize that one episode of pelvic inflammatory disease is supposed to carry 10% risk of tubal factor infertility.[5] Polycystic ovaries were found in almost equal percentage (16.66% in primary and 15% in secondary) of our patients in both the groups and was the second most common abnormality noted by us. Chaitra et al reported its occurrence in 25.7% in primary and in 13.3% of patients in secondary infertility as compared to respective figures of 20.51% and 4.54% reported

by Sridhar and Rambabu. It is well known that Endometriosis may lead to infertility but it is not sure whether it is the sole cause or one of the contributing factors. However its visual documentation and histopathological confirmation play an important role in the treatment of endometriosis.[6] Whereas some authors [2,3] found its incidence in 14.1/2% of primary and 4.54/13.3% of secondary infertility patients respectively, the corresponding incidence in our patients was 3.33& 10%. Genital tuberculosis used to be a very common cause of infertility in women in the past but we could see its evidence in form of tubercles in only one case with primary infertility indicating perhaps better control and management of tubercular disease in our country. However, others[2] found it in 2.56% and 4.54% in primary and secondary infertility respectively. Pelvic adhesions in peritubal and periovarian place also contribute significantly in causing infertility by interfering with ovulation, ovum pick up and its transport. Some authors[2] found it in 10.25 and 13.63% in primary and secondary infertility but we had just the opposite incidence with 13.33% in primary and 10% in secondary infertility. Fibroid uterus is another important cause of infertility and someone has rightly said that the uterus that does not grow seeds, grows weeds. Its incidence in our patients was in 6.66% in primary and 15% in secondary infertility as compared to 8% reported by Chaitra et al. Laparoscopy is thus a definitive way to diagnose unsuspected pathologies in infertile women and significantly contribute to their overall management.

Conclusion

Diagnostic laparoscopy is a valuable and indispensable investigative procedure in evaluation of female infertility. It should be employed early in the management of infertile women with history of pelvic inflammatory disease, pelvic surgery and long standing primary infertility.

References

1. Rutstein SO, Macro ORC, Shah IH. Infecundity, infertility, and childlessness in developing countries. DHS comparative reports No. 9. Calverton, Maryland, USA: ORC Macro and the World Health Organization; 2004 (Available from http://who.int/reproductivehealth/topics/infertility/ DH S- CR9pdf)
2. Sridhar D, Rambabu C. A study on laparoscopic evaluation of female infertility in South Indian population. Asian Pac. J. Health Sci. 2015; 2(2):165-8
3. Chaitra K, Prathima S, Savitha C, Anitha GS. Laparoscopy as a diagnostic tool in evaluation of female factors in infertility. Int J Reprod Contracept Obstet Gynecol 2017; 6(3): 864-7
4. Maheshwari A, Hamilton M, Bhattacharya S. Effect of female age on the diagnostic categories of infertility. Hum Reprod 2008; 23: 538-42
5. Khaula K. Role of diagnostic laparoscopy in evaluation of female subfertility. ServInst Med Sci 2005; 3: 31-4
6. Aziz N. Laparoscopic evaluation of female factors in infertility. J Coll Physicians Surg Pak. 2010; 20(10): 649-52.