

Hysterolaparoscopy As A Diagnostic And Therapeutic Tool In Female Infertility

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Abstract

Background: Hysterolaparoscopy is very effective tool because the uterus, tubes, adnexa, peritoneum, uterine cavity and tubal pathway can be assessed in one sitting and if required therapeutic intervention like ovarian drilling, septal resection, tubal cannulation etc can be done in same sitting. Keeping this in view present study was designed to assess the role of hysterolaparoscopy in evaluation of female infertility. **Aim:** To determine the role of hysterolaparoscopy in diagnosis and management of primary & secondary infertility. **Materials and Methods:** It is a retrospective observational study conducted at Alluri Sitaramaraju Medical College and Hosptial, Eluru from August 2020 to August 2021. The present study group consists of 80 patients with age group of (20- 40) years attending infertility OPD at Asram Hospital. **Results:** Out of 80 subjects, 16 lost to follow up and 14 presented with normal Hysterolaparoscopy findings .Among the remaining ones 10(12.5%) patients conceived spontaneously after hysterolaparoscopy.16(20%) patients conceived on ovulation induction, 08 (10%) patients conceived after intrauterine insemination, 06(7.5%) patients after intracytoplasmic sperm injection(ICSI) and 06 (7.5%)patients conceived after in vitro fertilization,4 (5%) patients did not conceive. **Conclusion:** PCOD is the commonest cause for infertility followed by endometriosis and tubal factor. Diagnostic hysterolaparoscopy is the best procedure to assess almost all possible structural pathologies. Laparoscopy has better role than ultrasonography in diagnosing endometriosis and pelvic adhesions. The diagnosis and operative procedure for treatment can be accomplished in same sitting. Thus, hysterolaparoscopy remains gold standard procedure for evaluation of female infertility and before planning further management.

Keywords: PCOD, fertility

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Introduction

Infertility has become the most elusive symptom of reproductive age group in recent times. It is defined as the inability of a couple to achieve conception after one year of frequent unprotected regular intercourse. Infertility can be primary if woman has never conceived before and secondary when there is prior conception irrespective of the outcome of pregnancy. However in patients with age more than 35 years evaluation should be done after 6months itself. World wide about 70 million people are subfertile and in India about 10-15% of reproductive age group couple are infertile. Prevalence of infertility in India is about 21.9% where in female factor contributes up to 40-55% and male factor contributes up to 25-40%. In female infertility, ovarian dysfunction is seen in 30-40% cases, tubal and pelvic factors up to 30-40%, idiopathic in up to 10-15%. Workup of female partner begins with history and examination. It is important to perform relevant investigations in a logical order at correct time. Routine pelvic examination and usual diagnostic procedures may miss majority of pelvic pathologies. Diagnostic hysterolaparoscopy is not a part of initial infertility evaluation but effective in evaluating long term infertility. Hysterolaparoscopy is very effective tool because the uterus, tubes, adnexa, peritoneum, uterine cavity and tubal pathway can be assessed in one sitting and if required therapeutic intervention like ovarian drilling, septal resection, tubal cannulation etc can be

done in same sitting. Keeping this in view present study was designed to assess the role of hysterolaparoscopy in evaluation of female infertility.

Materials and Methods

From It is a retrospective observational study conducted at Alluri Sitaramaraju Medical College and Hosptial, Eluru from August 2020 to August 2021. The present study group consists of 80 patients with age group of (20-40)years attending infertility OPD at Asram hospital.

Inclusion Criteria

All women between 20-40years age group who failed to conceive after 1 year of regular unprotected intercourse. Normal semen analysis report of husband.

Exclusion Criteria

Age more than 40 years
Patients with active pelvic infections

Patients with major medical disorders which are a contraindication for GA.

After obtaining approval from Institutional Ethics Committee and informed consent patients, this prospective randomized study was conducted in 80 patients between August 2020 – August 2021 at Alluri Sitarama Raju Academy of Medical Sciences, Eluru.

Detailed history, general examination and gynaecological examination were done. With all necessary investigations like baseline endocrinological investigations, post coital test and husband

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semen analysis done, patients were admitted a day before the procedure. Informed and written consent was taken in all cases. All the patients were kept fasting after 10 pm and Enema was given in the early morning on the day of surgery. They were advised to void completely before entering theatre. The diagnostic hystero-laparoscopy was performed under general anaesthesia with endotracheal tube intubation.

Operative procedure

Patient was kept in low lithotomy position, legs supported by stirrups. Abdomen and perineum cleaned and draped. Pneumoperitoneum was created by using co2. Once laparoscope was introduced, the

pelvic organs are first inspected (uterus, tubes, ovaries, pouch of Douglas are visualized for any pathology), followed by examining the whole peritoneal cavity. The hysteroscope was introduced into the cervical canal under vision. The uterine cavity was distended with 0.9% normal saline and examined. Chromoperturbation was done to check the patency of tubes by injecting dilute methylene blue through the intrauterine cannula. After the procedure, patients were transferred to postoperative ward and were discharged the next day.

Observations and Results

Out of 80 cases studied, 42 are of primary infertility and 38 are of secondary infertility.

Table 1: Age wise distribution is as follows:

Age group	Primary infertility	Secondary infertility
20-25	18 (42.8%)	3 (7.8%)
26-30	15 (35.7%)	17 (44.7%)
31-35	07 (16.6%)	14 (36.8%)
36-40	02 (4.7%)	4 (10.5%)

Table 2: Hystero laparoscopic findings in primary infertility as follows

Hystero laparoscopic findings in primary infertility	No of cases (42)
PCOS	11
Tubal	7
Endometriosis	3
Ovarian cyst	1
Fibroid	2
Uterine septum	2
Polyp	3
Synechieae	2
Unexplained	11

Table 3: Hystero laparoscopic findings in secondary infertility as follows

Hystero laparoscopic findings in secondary infertility	No of cases (38)
Pcos	3
Tubal	3
Synechieae	3
Endometriosis	9
Adhesions	5
Fibroid	4
Polyp	2
Tuboovarian mass	3
Unexplained infertility	3
Ovarian cyst	2

Table 4: Operative Procedures Done Are As Follows

Intervention done	Primary infertility	Secondary infertility
Laparoscopic ovarian drilling	11 (26.1%)	1 (2.63%)
Hysteroscopic cannulation	5 (11.9%)	2 (5.26%)
Cystectomy	1 (2.38%)	2 (5.26%)
Adhesionolysis	5 (11.9%)	12 (31.5%)
Polypectomy	3 (7.14%)	2 (5.26%)
Hysteroscopic septal resection	2 (4.96%)	
Submucosal fibroid removal	2 (4.96%)	4 (10.56%)

Discussion

In our study most commonly found pathology was polycystic ovarian disease (PCOD) 14 cases followed by endometriosis and then tubal factor. Out of 14 PCOD cases, 11 came with primary infertility and 03 with secondary infertility. Tubal factor is responsible for 11 cases of which 07 are primary and 04 are secondary infertility cases. Endometriosis takes third place with 12 cases of which 3 are primary and 09 are secondary infertility cases. 06 cases (2+4) presented with submucosal fibroid. Septate uterus was seen in 02 (PI) cases. Endometrial polyp was present in 05 (3 PI+2 SI) cases. Simple ovarian cyst is seen in 03 (1PI +2SI) cases. Tubo ovarian mass is present in 03 (SI) patients. Uterine synechieae are seen in 05 (2 PI +3SI) patients.

Peritoneal adhesions are seen in 05 (SI) patients. Based on the underlying pathology various therapeutic interventions were done which include ovarian drilling in 12 patients, hysteroscopic cannulation in 07 patients, cystectomy in 03 patients. Polypectomy, septal resection, adhesiolysis and removal of submucosal fibroid are the procedures done in patients with respective uterine pathology. Out of 80 subjects, 16 lost to follow up and 14 presented with normal hystero laparoscopic findings. Among the remaining ones 10 (12.5%) patients conceived spontaneously after hystero laparoscopy. 16 (20%) patients conceived on ovulation induction, 08 (10%) patients conceived after intrauterine insemination, 06 (7.5%) patients after intracytoplasmic sperm injection (ICSI) and 06 (7.5%) patients

conceived after in vitro fertilization.04 (5%) patients not conceived.

Conclusion

PCOD is the commonest cause for infertility followed by endometriosis and tubal factor. Diagnostic hysterolaparoscopy is the best procedure to assess almost all possible structural pathologies.Laparoscopy has better role than ultrasonography in diagnosing endometriosis and pelvic adhesions.The diagnosis and operative procedure for treatment can be accomplished in same sitting.Thus, hysterolaparoscopy remains gold standard procedure for evaluation of female infertility and before planning further management.

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