



ROLE OF HYSTEROLAPROSCOPY IN FEMALE INFERTILITY

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ABSTRACT

Infertility has become the most elusive symptom of reproductive age group in recent times. Routine pelvic examination and other diagnostic procedures may miss majority of pelvic pathologies. Hysterolaparoscopy is effective not only in diagnosing pelvic and adnexal pathologies, but also in therapeutic procedures like polypectomy, adhesiolysis, septal resection in the same sitting.

SUMMARY: Hysterolaparoscopy is the safe and effective diagnostic and therapeutic modality in diagnosing missed correctable pathologies in multiple sites like uterus, tubes, ovaries and peritoneal cavity. It can be considered gold standard definitive investigative procedure in evaluation and correction of female infertility.

KEYWORDS : Hysterolaparoscopy , Primary Infertility , Secondary Infertility.

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(1).
- However in patients with age more than 35 years evaluation should be done after 6months itself.
- Worldwide about 70 million people are subfertile(2).
- In India, incidence of infertility is about 10-15% of reproductive age group couple(3). Prevalence of infertility in India is about 21.9% where in female factor contributes upto 40-55% and male factor contributes upto 25-40%(4). In female infertility, ovarian dysfunction is seen in 30-40% cases, tubal and pelvic factors upto 30-40%, unusual causes in upto 10-15%(5).
- 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 as a GOLD STANDARD TECHNIQUE(6).
- Hysterolaparoscopy is very effective tool because the uterus, tubes, adnexa, peritoneum, uterine cavity and tubal pathway can be assessed in one sitting (7). 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.

OBJECTIVES:

To evaluate the role of various etiological factors and therapeutic intervention of infertility by Hysterolaparoscopy.

METHODOLOGY:

- It is a retrospective observational study conducted at Great Eastern Medical School and Hospital, Srikakulam

from 01st August 2019 to 31st March 2020.

- The present study group consists of 80 patients with age group of 20-40 years attending infertility OPD at GEMS hospital.

INCLUSION CRITERIA:

- All women between 20-40yrs of age group who failed to conceive after 2 years of regular unprotected intercourse.
- Normal semen analysis report of husband.

EXCLUSION CRITERIA:

- Age more than 40years.
- Patients with active pelvic infections.
- Patients with major medical disorders which are a contraindication for General anaesthesia.

PROCEDURE:

Detailed history, general examination and gynaecological examinations were done. All necessary investigations like baseline endocrinological investigations, post coital test and husband 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 urine completely before entering theatre. The diagnostic Hystero-laparoscopy was performed under general anaesthesia with endotracheal tube intubation. 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.

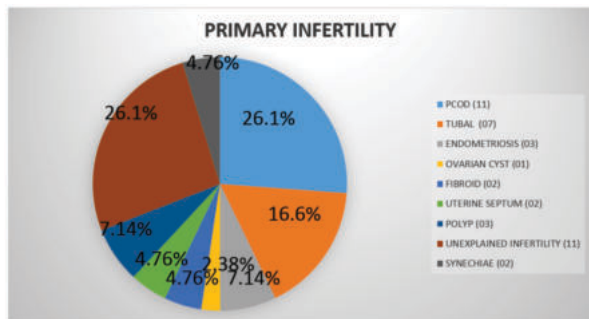
The uterine cavity was distended with 0.9% normal saline and examined. Chromopertubation was done to check the patency of tubes by injecting dilute methylene blue through the intrauterine cannula. After the procedure, patients were transferred to postoperative ward for observation and were discharged on the next day.

RESULTS

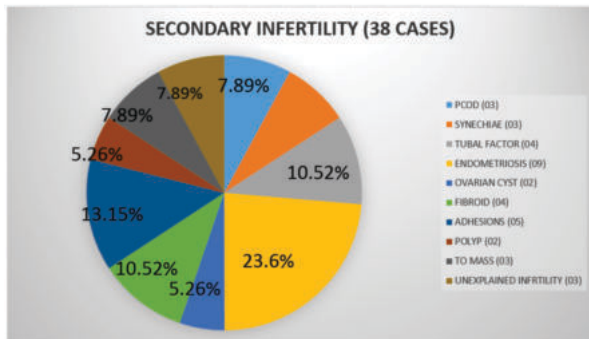
Out of 80 cases studied, 42 are of primary infertility and 38 are of secondary infertility.

AGE GROUP (Years)	PRIMARY INFERTILITY	SECONDARY INFERTILITY
20-25	18(42.8%)	03(7.89%)
26-30	15(35.7%)	17(44.7%)
31-35	07(16.6%)	14(36.8%)
36-40	02(4.76%)	04(10.5%)

HYSTEROLAPROSCOPIC FINDINGS: In Primary Fertility (42 Cases)



Secondary Infertility (38 Cases)



- 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. Endometriosis is responsible for 12 cases of which 03 are primary and 09 are secondary infertility cases. Tubal factor takes third place with 11 cases of which 07 are primary and 04 are secondary infertility cases.
- Submucosal Fibroid - 06 (2+4) cases.
- Septate Uterus was seen in 02 (PI) cases.
- Endometrial Polyp was present in 05 (3+2) cases.
- Simple Ovarian Cyst is seen in 03 (1+2) cases.
- Tubo Ovarian Mass is present in 03(SI) cases.
- Uterine Synchiae are seen in 05(2+3) cases.
- Peritoneal Adhesions are seen in 05 (SI) cases.

OPERATIVE PROCEDURE Based on the underlying pathology various therapeutic interventions were done.

INTERVENTION DONE	PRIMARY INFERTILITY	SECONDARY INFERTILITY
Laprosopic ovarian drilling	11 (26.1%)	01 (2.63%)
Hysteroscopic cannulation	05(11.9%)	02(5.26%)
Cystectomy	01(2.38%)	02(5.26%)
Adhesiolysis	05(11.9%)	12(31.5%)
Polypectomy	03(7.14%)	02(5.26%)
Hysteroscopic septal resection	02(4.76%)	----
submucosal fibroid removal	02(4.76%)	04(10.5%)

- 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 hysteroscopy findings.
- Among the remaining ones 10(12.5%) patients conceived

spontaneously after hysteroscopy.

- 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.

DISCUSSION:

In the present study, Most cases were in age group of 26-30 years (40%). In a study by Shetty et al also observed same distribution, maximum number of patients were in age group of 26-30 years (32.35%).

- Butt et al studied 40 patients and observed normal laparoscopic findings in 37.5% and abnormalities in 62.5% patients (8).
- In our study bulk of patients (82.5%) had abnormal findings and only 17.5% patients had normal study on laparoscopic evaluation.
- Our study had majority of cases with PCOD 19.5% followed by endometriosis in 15% and then tubal factor in 13.75%, adhesions in 6.25%, endometrial polyp in 6.25%, submucosal fibroid in 7.50% and normal laparoscopy finding in 17.5% cases.
- Haider et al in her study found endometriosis in 43.33%, tubal blockage in 16.66%, PCOD in 13.3%, 17.6% patients had pelvic inflammatory disease and 6% cases had normal findings(9).

Patients with PCOD had better pregnancy outcomes after ovarian drilling. All the cases of septate uterus conceived spontaneously after resection of the septum. Tubal spasm and blockage were corrected and rate of conception increased. Adhesiolysis also showed drastic change in pregnancy rate. All these procedures are done by Hysteroscopy and there was no complication reported in any procedure performed, except for mild postoperative pain in few patients. Thus Hysteroscopy is undoubtedly a gold standard investigation and best in view of therapeutic intervention too.

CONCLUSION:

- PCOD is the commonest cause for infertility followed by endometriosis and tubal factor.
- 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.
- Hence, Hysteroscopy remains the best and gold standard procedure for evaluation of all possible structural pathologies in female infertility, and before planning further management.

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