INTRODUCTION:

Implantation is one of the most critical step in pregnancy and hence, any intrauterine abnormalities i.e., polyps, adhesions, submucous myomas, endometritis, septa, anomalies of ostia or cervical canal might have negative influence on the reproductive performance of a female. It has been well known that the uterine factor contributes to approximately 15-20% as a cause of female infertility. Hysterosalpingography and transvaginal sonography are most commonly used for this purpose. However, these modalities do not necessarily prove as efficient always and might lead to numerous false positive as well as false negative findings leading to increase in the dilemma of treating clinicians. Hence, ruling out any evidence of any intrauterine pathology by hysteroscopy becomes an important step before subjecting the patient to any of the assisted reproductive techniques (ART).

With recent advances in hysteroscopic techniques, it has become feasible to perform diagnostic office hysteroscopy with such ease that patients do not even require anesthesia thus, avoiding any related complications and other invasive procedures too. Moreover, hysteroscopy helps in diagnosing as well as treating certain uterine complications and other invasive procedures too. So, hysteroscopy has a role in evaluation of infertile women with no obvious abnormality on HSG before they proceed to more aggressive treatment.

MATERIALS AND METHODS:

It was a hospital based prospective study which was conducted in the department of reproductive medicine, I.G.I.M.S, Patna. A proper ethical clearance was obtained from the Institutional Ethical Committee before beginning the study. The duration of our study was one year (May 2018-April 2019). We recruited 60 infertile women who had 3 or more IUI failures in this study.

Inclusion criteria:

- Infertile women in the age group 20-35 years
- These women had history of 3 or more attempts of Intrauterine insemination (IUI) failures

Exclusion criteria:

- Women having history of previous pelvic surgeries and/or having history of symptoms of severe dysmenorrhea, pelvic pain, hydrosalpinx and pelvic inflammatory disease
- Women with sexually transmitted disease
- Women with active vaginal bleeding

RESULTS:

Out of these 60 patients, 13 revealed no pathology in uterine cavity in hysteroscopy. The rest 47 patients had some findings in hysteroscopy. These findings are mentioned in Table 1.

Table 1: Characteristics of women in study

| Age (years) | Mean ±SD | 27.4±6.1 |
| BMI (kg/m²) | 25.1±2.5 |
| Duration of infertility (years) | 5.6±4.6 |
| Type of infertility | Primary 44/73.3% Secondary 16/26.7% |

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endometritis, 7(11.6%) had intrauterine patchy fibrosis, 5 (8.3%) patients had intrauterine septa, 4(6.6%) had intrauterine polyps and 1(1.6%) had intrauterine foreign body (Table 2). Subtle lesions are lesions of unknown pathological significance that include diffuse polyposis, strawberry pattern, hypervascularization, mucosal elevation and other endometrial defects. The following pie diagram1 represents these findings in pictorial form.

Table 2: Findings of uterine cavity on hysteroscopy

| Normal findings | 13 | 21.6% |
| Intrauterine adhesions | 13 | 21.6% |
| Intrauterine septa | 5 | 8.3% |
| Intrauterine fibrosis | 7 | 11.6% |
| Intrauterine polyp | 4 | 6.6% |
| Intrauterine foreign body | 1 | 1.6% |
| Chronic endometritis | 7 | 11.6% |
| Subtle findings | 10 | 16.6% |

Pie Diagram 1: Distribution of various hysteroscopic findings of the study patients

DISCUSSION:

Despite recent advances in the field of Assisted Reproductive Technologies (ART) in the modern era, implantation rate is still on the lower side, i.e around 15 to 20 % . It is a well understood fact that uterine receptivity has a key role in the successful implantation and clinical pregnancy rates. From time immemorial several studies and attempts of utilising various diagnostic modalities to accurately assess the uterine receptivity and factors have been tested and tried. Some uterine factors that can be measured by transvaginal sonography are endometrial thickness, pattern, and blood flow in the uterine and subendometrial arteries.

Structural uterine abnormalities may lead to failure of implantation and thus failed cycles of ART. The incidence of uterine abnormalities in patients undergoing hysteroscopy has been reported to be between 19 and 50%. It has also been reported in the past by several researchers that uterine anomalies like polyps, septa etc are more commonly found in infertile patients as compared to fertile ones. There are different mechanisms which are hypothesised to cause infertility by the intrauterine abnormalities. Polyps may cause infertility by virtue of their location, thereby causing mechanical block (e.g., tubocornual infaundibulum) and allowing a direct visualization of the endometrium, revealing the nature of the pathologic with a high diagnostic accuracy. So, hysteroscopy has a role in evaluation of infertile women with no obvious abnormality on HSG before they proceed to more aggressive treatment options.

CONCLUSION:

Both HSG and hysteroscopy are complementary to each other in diagnosing uterine abnormalities. Hysteroscopy is an accurate and less invasive method for the evaluation of uterine cavity. It is dynamic test and allows a direct visualization of the endometrium, revealing the nature of the pathology with a high diagnostic accuracy. So, hysteroscopy has a role in evaluation of infertile women with no obvious abnormality on HSG before they proceed to more aggressive treatment options.

REFERENCES