



A STUDY ON HYSTEROSALPINGOGRAPHY FINDINGS IN PATIENTS WITH INFERTILITY

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ABSTRACT **Introduction:** Infertility is a major global problem and is regarded as a social stigma in the society. It is defined as the inability of a couple to conceive after 12 month of regular unprotected sexual inter course^[1]. It is primary if the couples had never been pregnant, whereas secondary is the inability to get pregnant after an earlier pregnancy which may or may not have led to live birth^[2]. **Aims And Objectives:** The aim of the study is to evaluate the structural abnormalities of the uterus and tubes in women WITH PRIMARY INFERTILITY as elucidated by HSG. **Materials And Methods:** The present study was a RETROSPECTIVE STUDY, conducted at department of Obstetrics and Gynaecology GMB BARAMULLA. The study was conducted for a period of ONE year from January 2024 to December 2024. **Results:** In our study 50 – 60 % of patients had normal tubal findings on HSG. Out of 50 patients 11 (22%) had right Cornual block and 10 (20%) had left Cornual block. 6 (12%) had righ hydrosalpinx and 9 (18%) had left hydrosalpinx.

KEYWORDS : Infertility, Hysterosalpingography (HSG) , Fallopian tubes.

INTRODUCTION

Infertility is a major global problem and is regarded as a social stigma in the society. It is defined as the inability of a couple to conceive after 12 month of regular unprotected sexual inter course^[1]. It is primary if the couples had never been pregnant, whereas secondary is the inability to get pregnant after an earlier pregnancy which may or may not have led to live birth^[2]. It is documented that 15% of all women experience primary or secondary infertility at one point in time in their reproductive life^[3]. Tubal causes of infertility account for 35–40% causes of infertility. The fallopian tubes are vulnerable to infection and surgical damage which may impair function by affecting the delicate fimbriae or highly specialized endosalpinx. Tubal disease with blockage can involve the proximal (cornual) part, the mid part or distal part. Peritubal adhesions due to infection, inflammation, tuberculosis, endometriosis, previous surgeries and ectopic pregnancy are common factors in tubal sub fertility and need to be assessed. HSG is a common test used to assess fallopian tube patency, morphology of uterus and cervix. It is simple, safe and inexpensive, compared to other methods of evaluation of these structures. It has a sensitivity of 65% and a specificity of 83% in detecting tubal blockage^[4]. It has also been suggested that HSG has a therapeutic sole in enhancing sub fertility^[5]. By HSG, along with tubal patency and pathology, uterine pathologies like sub mucous fibroid, endometrial polyp, intrauterine synechiae, congenital malformations of uterus and cervical stenosis can also be detected.

Other imaging modalities which play vital role in assessing infertility in females include ultrasound and MRI.. MRI IS limited in its role in fallopian tube assessment but invaluable in evaluating congenital Mullerian duct anomalies and uterine wall lesions. Hysteroscopy and laparoscopy are other complementary but invasive and expensive procedures for fallopian tubes, uterus and cervix evaluation^[6].

Aims And Objectives

The aim of the study is to evaluate the structural abnormalities of the uterus and tubes in women WITH PRIMARY INFERTILITY as elucidated by HSG.

MATERIALSANDMETHODS

The present study was a RETROSPECTIVE STUDY, conducted at department of Obstetrics and Gynaecology GMB BARAMULLA. The study was conducted for a period of ONE year from January 2024 to December 2024. The study population included all the cases aged between 20–40 years attending the infertility OPD. These cases were screened initially for all the causes of infertility by a thorough clinical history and physical examination. Those patients who had primary infertility and had already undergone all basic investigations of infertility including HSG were included in the study. HSG films and their radiographic reports were collected from the patients. Total of 50 patients fulfilled the inclusion criteria and were included in the study.

Inclusion Criteria

- Married women between the age group of 20–40 years with

primary infertility

- Confirmed ovulatory cycles or ovarian reserve
- Who had undergone hysterosalpingogram

Exclusion Criteria

- Who had not undergone HSG
- Past history of pelvic surgical procedures
- Secondary Infertility

RESULTS

Table 1): Age Distribution:

Age in years	Number of Patients	Percentage
18 – 20 years	15	30
21 – 30 years	26	52
31 – 40 years	9	18
Total	50	100

In this study maximum of patients 26 (52%) belonged to age group of 21 – 30 years.

Table 2): Finding In Tubes:

Finding	Right	Percentage	Left	Percentage
Normal	30	60	20	56
Cornual block	11	22	10	20
Hydrosalpinx	6	12	9	18
Fimbrial block	3	6	3	6
Total	50	100	50	100

In our study 50 – 60 % of patients had normal tubal findings on HSG. Out of 50 patients 11 (22%) had right Cornual block and 10 (20%) had left Cornual block. 6 (12%) had righ hydrosalpinx and 9 (18%) had left hydrosalpinx.

Table 3): Finding In Uterus:

Finding	Number of Patients	Percentage
Normal	32	64
Congenital Anomalies	10	20
Filling Defect	4	8
Irregular Contour	4	8
Total	50	100

In our study out of 50 patients 32 (64%) had normal uterine findings. 10 (20%) had Congenital Anomalies. Filling defect was found in 4 (8%) patients and Irregular Contour was found in 4 (8%) patients.

DISCUSSION

Though there are other advanced and efficient methods of evaluating uterine cavity and Fallopian tubes, HSG is still widely used because it is cheap, readily available and easy interpret. HSG outlines the uterine cavity and fallopian tubes and apart from demonstrating normal patency of the fallopian tubes and their communication with peritoneal cavity, it can also demonstrate congenital abnormalities of the uterine cavity or incompetence of the internal ostium of the cervix which may

cause recurrent abortions.



Fig. 1) Normal HSG



Fig. 2) Right Cornual Block



Fig. 3) Left Hydrosalpinx

study done by Malwadde *et al* Dutta *et al.* [7, 8]. Fallopian tube abnormalities are seen in 20 (40%) of right tube and 22 (44%) of cases of left fallopian tubes. In a similar study by T Radha bhai Prabhu *et al.* [9] Tubal defect can be due to infection mainly due to tuberculosis and sexually transmitted diseases. Previous pelvic surgeries and uterine manipulations such as D & C damage the tubes. Salpingitis Isthmica Nodosa and cornual polyp are rare causes of tubal defect. Pelvic inflammatory disease (PID) is a major reason for tubal sub fertility. PID can damage the tube at multiple sites and also predispose to ectopic pregnancy. The hysterosalpingography has both therapeutic and diagnostic value. Following HSG, certain minor/mild uterine adhesions and partial tubal occlusions are lysed as well as improves patency of fallopian tubes because of flushing of tubes by contrast media [10].

CONCLUSION

To conclude, tubal factors account for 20% in women presenting with infertility. All infertile females should be evaluated for tubal pathology.

HSG is a very effective method to assess tubal status. HSG plays a significant role in the detection of uterine congenital anomalies and tubal causes of female infertility.

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In the present study, maximum number of infertile patients belonged to age group of 20-30 years, 26 (52%) which was comparable with the