

HYSTEROSCOPY IN THE INVESTIGATION OF FEMALE INFERTILITY

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SUMMARY

The present study was undertaken to evaluate the role of hysteroscopy in the investigation of infertile woman and to compare it with the traditional hysterosalpingogram.

After preliminary investigations of Endometrial biopsy and HSG, 60 patients were selected, comprising of 30 patients with normal HSG (Group I) and 30 patients with abnormal HSG (Group II). All were subjected to hysteroscopic examination under general anaesthesia along with diagnostic laparoscopy. Hysteroscopy revealed abnormality in 28 (46.6%) which included, intrauterine adhesions, polyp, fibroid nodules, hypoplastic uterus and mullarian defects. In group I, patients with normal hystero-graphy, hysteroscopy revealed abnormality in 15 (50%) with a false negative rate of HSG for uterine factors beign 50%. In group II, out of 6 patients showing uterine abnormality in HSG, only 3 cases could be confirmed on hysteroscopy. In 20 patients, showing only tubal pathology on HSG, uterine abnormalities were detected in 6 patients giving a overall false negative rate of HSG as 42%.

INTRODUCTION

Infertility is a universal problem, affecting 10-15% of married couples. Uterine factors may directly and indirectly account

for reproductive failures in 15-59% of cases (Lindmann et Mohr 1977):

The time honoured and traditional method of studying uterine factors has been hysterosalpingography. Diagnostic laparoscopy has established its superiority over HSG in studying tubal factors. The

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main drawback of diagnostic laparoscopy is its failure to visualize the interior of uterine cavity. This has been overcome by hysteroscopy. This study was undertaken to evaluate the role of hysteroscopy in the investigation of uterine factors in infertility and to compare it with traditional HSG.

MATERIAL AND METHODS

This study was conducted in selected infertile women between 18-40 yrs, attending the Gynaecology Clinics of Smt. S. K. Hospital, New Delhi.

They were subjected to endometrial biopsy and husband's semen analysis after excluding male factors, HSG was performed. Subjects were divided into 2 major groups, group (I) of 30 patients with normal HSG and group (II) of 30 patients with abnormal or failed HSG. Hysteroscopy was successfully performed along with diagnostic laparoscopy under G.A. in all cases except in one patient due to failure of cervical dilation.

OBSERVATIONS

The subjects included 37 (61.6%) cases of primary infertility and 23 (38.4%) cases of secondary infertility. The mean

Total No.	60
Primary infertility.	37 (61.6%)
Secondary infertility	23 (38.4%)
Mean age :	25.5 ± 2.9 yrs %
Duration (Mean)	
Primary infertility	4.8 ± 2.19 yrs
Secondary infertility	3.7 ± 2.24 yrs

age was 25.5 ± 2.9 yrs. The mean duration of primary infertility was 4.8 ± 2.19 years and secondary 3.7 ± 2.24 (Table I). Group I comprised of 30 patients with normal HSG and Group II comprised of 30 patients with abnormal or failed HSG. The uterine abnormalities detected in Group II included uterine space occupying lesion in 2 (6.6%), intrauterine adhesions in 3 (10%) and developmental defect in 1 (3.3%) cases (Table II). Hysteroscopy was performed in all 60 patients except one. It demonstrated normal uterine cavity in 32 cases (53.4%) and uterine abnormalities in 27 (45%) (Table III). These

Table II
Intrauterine abnormalities in 30 abnormal HSG

Lesions	Primary Infertility		Secondary Infertility		Total	
	No.	%	No.	%	No.	%
Space occupying lesion	2	6.6	—	—	2	6.6
Adhesions	1	3.3	2	6.6	3	10.0
Developmental defect	—	—	1	3.3	1	3.3

Table III
Intrauterine abnormalities at hysteroscopy

Lesions	Primary Infertility		Secondary Infertility		Total	
	No.	%	No.	%	No.	%
Normal	19	31	13	21.6	32	53.3
Abnormal						
- Polyp	2	3.3	1	1.6	3	5
- Fibroid	1	1.6	—	—	1	1.6
- Adhesion	6	10	5	8.3	11	18.3
- Septum	2	3.3	—	—	2	3.3
- Endometritis	3	5	3	5	6	10.0
- Hypoplastic uterus	3	5	—	—	3	5
- Mullerian defect	1	1.6	—	—	1	1.6
- Failed	—	—	1	1.6	1	1.6

Table IV
Hysteroscopic findings

30 cases of normal HSG (Group I) and 30 cases of abnormal HSG (Group II)

Lesions	Group I		Group II	
	Number	Percentage	Number	Percentage
Normal	15	50	17	56.3
Abnormal				
- Polyp	1	3.3	2	6.6
- Fibroid	—	—	1	3.3
- Adhesions	6	20	5	16.6
- Septum	1	3.3	1	3.3
- Hypoplastic	2	6.6	2	6.6
- Uterus	—	—	1	3.3
- Mullarian duct Endometriosis	6	20	—	—

included intrauterine adhesions in 11 defect in 1 (1.6%) and endometritis in 6 (18.3%), polyp in 3 (5%) fibroid in 2 (3.2%), (10%). The findings of HSG and hypoplastic uterus in 3 (5%), mullerian hysteroscopy are compared in Table IV.

Of 30 patients in group I (normal HSG) uterine abnormalities were detected in 15 (50%) patients. The commonest abnormality was intrauterine adhesions which varied from mild, flimsy adhesions to dense, fibrous adhesions. Of 30 patients with abnormal HSG group II, uterine abnormality was confirmed in 3 out of 6 patients. Of 20 patients showing only tubal pathology in HSG, hysteroscopic abnormalities were detected in 6 patients.

DISCUSSION

The efficacy of hysteroscopy over hystero-graphy in the evaluation of uterine factors has been extensively debated. While some considered hysteroscopy to be superior (Kessler & Lanet, 1986), others do not find it to be of much value (Snowden et al 1984). Others have adopted a unifying approach to consider the two procedures complimentary (Fayez et al 1986). In the present study intrauterine pathology was detected in 27 (45%) patients on hysteroscopy as compared to 6 patients reported on hystero-graphy. Various workers have reported, uterine abnormality to be ranging from 41.2% (Cohen and Dmowski, 1973) to 59% (Lindmann and Mohr 1977). The incidence of various hysteroscopic abnormalities have been

quoted to be different in these studies. However the nature of lesions in the form of adhesions, polyp, myomas, septum etc. are almost similar. The overall false negative rate of HSG over hysteroscopy was 42% and false positive rate was 50%. Disagreement between the two procedures was found in 44.6%.

CONCLUSION

Hysteroscopy yields information not revealed by HSG. It is more accurate and precise in evaluation of uterine factors as it helps in knowing the true nature and extent of uterine abnormalities. Though the exact contribution of these uterine factors in causing infertility is difficult to assess, they may influence the results of various assisted reproductive techniques and hence must be thoroughly evaluated by hysteroscopy before these techniques are applied.

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