

## HYSTEROSCOPY IN INFERTILITY & THE PROBLEM OF PREVIOUS PREGNANCY LOSS

By

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### SUMMARY

Fourteen cases of Primary infertility, two cases of Secondary infertility and six cases of previous "pregnancy loss" were subjected to hysteroscopy along with conventional diagnostic methods. Three cases of uterine septum, five cases of Asherman's syndrome, two cases of hypoplastic uterus, one case of myoma and one case of endometrial polyp could be diagnosed on hysteroscopy in the total study. False positive diagnosis of uterine septum on H.S.G. in one case was ruled out on hysteroscopy. The site, extent & severity of intrauterine adhesions were more reliably interpreted with hysteroscopy than HSG; lysis of adhesions with hysteroscopy was an added advantage, being less traumatic under direct vision. A case of endometrial polyp missed on previous D & C was diagnosed on histopathologic examination after hysteroscopy directed biopsy. There was no major complication on hysteroscopy in the study.

### *Introduction*

Uterine factors like Uterine synechia, septum and myoma may be responsible for both primary and secondary infertility (Taylor & Hamou, 1983) as well as previous pregnancy losses. Good clinical examination including sounding of uterus coupled with investigations like Hysterosalpingography and Ultrasound often help detect these lesions. But ultrasound is not

often helpful, nor is it available everywhere. HSG has been shown to give false reports (31.7% by Valle, 1980).

### *Aims & Objectives*

The aim of the present study was to evaluate the role of hysteroscopy in Infertility and the problem of previous pregnancy loss in the light of conventional investigative methods.

### *Materials & Methods*

Fourteen cases of primary infertility, two cases of Secondary infertility and six

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cases with history of previous pregnancy loss were taken up for the study at A.I.I.M.S., New Delhi, from August 1984 to May 1986. Routine investigations (for both male and female partners) and HSG in some appropriate cases were carried out prior to subjecting the patients for hysteroscopy.

Hamou's colpomicrohysteroscope (Int. Patent 2615 E-30°, Hamou, M.D.) with CO<sub>2</sub> as distension medium was used for panoramic hysteroscopy under Diazepam/Pentazocine sedation. Those cases needing histopathologic examination of the endometrium had hysteroscopy in the premenstrual phase immediately followed by D & C. Cases with intrauterine adhesions were subjected to Target abrasion immediately followed by insertion of Lippes' Loop, with postoperative hormone therapy (Estrogen & Progesterone) for 60 days. The cases were on follow-up to watch for any complication.

#### Observations & Results

Twenty two cases were taken up for the present study. Their presenting problems and age distribution are shown in

Table-I. Primary infertility patients were mostly 25 years or more. Menstrual patterns & reports of HSG, Hysteroscopy and Histopathology (on D & C) are shown in Table-II and Table-III. Abnormalities detected on hysteroscopy in the study was in 12/22 cases i.e. 54.5% (Table-IV). Results of target abrasion are shown in Table-V.

False positive diagnosis of uterine septum made on HSG in one case of Primary infertility was ruled out on hysteroscopy. The site, extent and severity of intrauterine adhesions were better interpreted with hysteroscopy than HSG. Lysis of adhesion was under direct vision. Endometrial polyp was diagnosed on H.P. after hysteroscopic biopsy in one case with H/O previous pregnancy loss; this was missed on previous D & C. There was no major complication in the study except for difficult visualization of uterine cavity due to myoma in one case.

#### Discussion

Synechia, uterine septum & myoma have been detected on hysteroscopy in primary infertility cases in our study on

TABLE I  
PRESENTING PROBLEMS & AGE DISTRIBUTION OF THE PATIENTS

Age groups (in years)	Pr. Infertility (14 cases)	Sec. Inf. (2 cases)	Prev. Preg. loss (6 cases)
20	-	-	-
20 - 24	1	-	2
25 - 29	5	2	3
30 - 34	5	-	1
>35	3	-	-



**TABLE II**  
**MENSTRUAL PATTERNS & REPORTS OF INVESTIGATIONS - PR. & SEC.INF.**

<i>Fertility Status (No.)</i>	<i>Menstrual Patterns (No.)</i>	<i>HSG</i>	<i>Hysteroscopy (No.)</i>	<i>H.P.(No.)</i>	
Pr.Inf (14)	Hypomen-(9)	-	Ut-septum (1)	Sec.E. (1)	
		-	Myoma (1)	Basal E. (1)	
		-	Sec. E. (1)	Hyperpl.E (1)	
	Amenorrhoea (4)	Ash.Sy (2)	Ash.Sy (4)	Atroph.E (1)	Scanty tissue (6)
		Genit.T.B. (2)	Prol. E (1)	Hypopl.Ut (2)	Hypopl.Ut (2)
		-	Atroph. E (2)	Sec. E (1)	Scantyitis (1)
Oligomenorrhoea (1)	Ut. Sept (1)	No. Sept. (1)	Prol. E. (1)	Prol. E. (1)	
Sec. Inf (2)	Hypomen (2)	-	Sec. E (1)	Sec. E. (1)	
			Atroph.E (1)	Scant. (1)	

**TABLE III**  
**MENSTRUAL PATTERNS & REPORTS OF INVESTIGATION-H/O. PREV. PR. LOSS**

<i>Parity</i>	<i>Menstr. Patterns (No.)</i>	<i>HSG</i>	<i>Hysteroscopy</i>	<i>H.P.</i>
P2 + 3	Hypomen (1)	Ash.Sy	Ash.Sy	Prol.E.
P0 + 1	Metrorrhagia (1)	-	End. Polyp	End.Polyp
P0 + 1	Normal (1)	Ut.Sept.	Ut.Sept.	-
0 + 3	Normal (1)	Ut.Sept.	Ut.Sept.	-
0 + 2	Normal (1)	-	Normal	-
0 + 3	Normal (1)	Normal	Normal	-
			Sec. E.	Sec. E.

**TABLE IV**  
**ABNORMALITIES DETECTED ON HYSTEROSCOPY IN THE STUDY**

<i>Presenting Prolems (No)</i>	<i>Abnormalities</i>					<i>Total No. of Abn</i>	<i>%</i>
	<i>Ut.Sept.</i>	<i>Ash.Sy</i>	<i>Myoma</i>	<i>Hypopl.Ut.</i>	<i>End.Pol.</i>		
Pr. Inf. (14)	1	4	1	2	-	8	44.4
Sec.Inf. (2)	-	-	-	-	-	-	0.00
H/o.Prev. Pr. Loss (6)	2	1	-	-	1	4	66.6

Total abnormalities 12/22 i.e. 54.5%

TABLE V  
TARGET ABRASION & RESULTS

<i>Pr.Problems</i>	<i>Parity</i>	<i>Menstr. Patterns</i>	<i>Aetiology</i>	<i>HSG</i>	<i>Hyst.</i>	<i>Results</i>
Pr.Inf. (4)	P <sub>0</sub>	Hypom.	MTP - 1	(3)	All	1-Preg.
			MTP with CU-T-1			2-N Flow
			Myomectomy-1 Unknown -1			1-No.change
Prev. Pr. Loss (1)	P <sub>2</sub> +3	Hypom.	Unknown -1			1-Waiting

hysteroscopy in primary infertility cases in our study similar to the observations of Taylor & Hamou (1983). In the present study, synechia was found in 28.6% of cases with primary infertility and none of the two cases of Secondary infertility, while the findings of Taylor and Hamou (1983) and Valle (1980) are 3.7-15.5% in primary infertility and 32.6-41.7% in secondary infertility. If both Primary & Secondary infertility cases are considered together, abnormalities have been detected in 8 out of 16 cases (50%) in the present study. This is similar to the reports of Cohen & Dmowski (1973) Mohr & Lindemann (1977), Taylor & cumming (1979) and Valle (1981) 43.7%, 59.3%, 44.1% and 62% respectively. However, Rosenfeld (1978) detected abnormalities in only 19% of his 100 patients.

Six cases with history of previous pregnancy loss studied had Asherman's syndrome, uterine septum and endometrial polyp, in one case each. Taylor and Hamou (1983) also came across synechia and septa in their cases with previous pregnancy loss.

False positive diagnosis of uterine septum on HSG was ruled out on hysteroscopy in one case of primary infertility. The site, extent and severity of adhesions in Asherman's syndrome were better evaluated on hysteroscopy than with HSG. Target abrasion was under direct vision and thus helped avoiding extra manipulation of the instrument. Valle (1981), Hamou et al (1983) and Snowden et al (1984) also have false positive reports of HSG (in 31.7%, 18% and 31% cases respectively). Neuwirth (1975) is also of the opinion that false positive results may sometimes be found on HSG due to blood, mucus, air bubble and transient distortion of the cavity. However, Siegler (1977) found both HSG and hysteroscopy equally accurate in diagnosing endometrial polyps and synechiae. Hysteroscopic lysis of adhesions claimed superior to conventional methods of blind curettage (March 1983). Sugimoto (1978) Taylor and Hamou (1983) and Hamou & Salat Baroux (1983) have shown establishment of normal menstrual flow by hysteroscopic lysis of adhesion in 74%, 85% & 85.5% of cases respectively, which is similar to our finding of 75%.



Term pregnancy rates in their series were 23.5%, 50% & 38.4% respectively. We had one patient of term pregnancy (25%).

One case of endometrial polyp causing metrorrhagia in a case with previous pregnancy loss was missed on previous D & C. This could be diagnosed on hysteroscopic biopsy. The possibility of missing focal lesions on D & C have been observed by Valle (1981), Gribb (1960) and Telinde (1972).

### Conclusions

Hysteroscopy is an important supplemental tool in infertility and the problem of previous pregnancy loss, particularly for reliable diagnosis of uterine septum and of the site, extent and severity of intrauterine adhesions. It is confirmative of, and in some cases, superior to HSG. Therapeutic applications in lysis of adhesion, resection of septum and removal of myoma are other important fields of hysteroscopy in infertility and pregnancy loss.

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