

## COMPARATIVE EVALUATION OF HYSTEOSALPHINGOGRAPHY AND LAPAROSCOPY IN INFERTILITY

By

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### SUMMARY

The present study correlates HSG and Laparoscopy in the investigation of the female partner of an infertile couple. The HSG was normal in 27.69%. There was bilateral cornual block in 13.84% and bilateral fimbrial block in 6.15%. Beaded tubes were seen in 9.23% and peritubal adhesions were observed in 4.6% cases. On the other hand laparoscopy found 60% fallopian tubes to be normal. Beaded tubes were seen in 9.23%. Chromopertubation revealed bilateral spillage in 55.38% cases, Cornual block in 3.07% only. Adhesions were found in 28% cases. The false negative rate was 10.76% and the false positive rate 26.15%. Thus HSG and laparoscopy were in complete agreement in 64% cases.

### Introduction

The introduction of laparoscopy has contributed immensely to a rational management of a infertile women. Endoscopy now provides an insight in to the exact condition prevailing in the pelvis and dispenses with unnecessary laparotomies. HSG which previously was the sole method of knowing the status of the internal genital tract, has now almost been replaced by laparoscopy.

### Subject & Method

The present study correlates HSG

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and laparoscopy in the investigation of the female partner of an infertile couple. 65 cases were studied. A detailed history was taken and the nature and duration of infertility was noted. All necessary examination and investigation were carried out. HSG was done using Conray 280, a water soluble dye. Depending on the result of HSG, laparoscopy was done either after three month of waiting if the HSG was normal or in the next cycle if any pathology was detected. The laparoscopy was done under general anaesthesia.

### Observation

The series included cases between 21 to 35 years of age. 49 patients were of

primary infertility and 16 of secondary infertility. Of these 9 patients had history of spontaneous abortion, 5 had previous full term normal deliveries and 2 patients

had an M.T.P. A positive history of puerperal or post abortal sepsis could not be obtained. Basic investigations were normal in majority of the patients.

**TABLE - I**  
**HYSTEOSALPHINGOGRAPHY**

<i>Finding of HSG</i>	<i>No. of cases</i>	<i>Percentage</i>
Normal HSG	18	27.69
Bilateral Cornual block	9	13.8
Bilateral fimbrial block	4	6.15
Unilateral cornual block with Contralateral patent tube	16	24.61
Unilateral cornual block with contralateral fimbrial block	5	7.69
Bilateral hydrosalpinx	3	4.61
Unilateral hydrosalpinx	10	15.38
Beaded tubes	6	9.23
Peritubal adhesions	4	6.15

**TABLE - II**  
**LAPAROSCOPY**

<i>Findings of fallopian tubes</i>	<i>No. of cases</i>	<i>Percentage</i>
Normal	39	60%
Beaded tubes	6	9.23
Unilateral hydrosalpinx	10	15.38
Bilateral hydrosalpinx	4	6.15
Restricted mobility	13	20.0
Fimbriae not seen	9	13.84
Fimbriae normal	44	67.69
Spillage positive	47	72.30
Both tubes patent	36	55.38
Unilateral patent with Contralateral fimbriaal block	11	16.92
Spillage negative	11	16.92
Bilateral cornual block	2	3.07
Bilateral fimbrial block	9	13.84

Adhesions were found in 28%. 16% of stage I and 6% stage II & stage IV (Hulka classification) each.

TABLE - III

HSG diagnosis	Laparoscopic diagnosis	
	(A) Normal	(B) Abnormal
A) Normal 18	11	7
B) Abnormal 47	17	30

TABLE - IV

HSG Diagnosis	Laparoscopic diagnosis				
	Bilateral Cornual block	Bilateral fimbrial block	Unila- teral block.	Bilat- eral spill	Unilateral Cor.with Contralat. fim.block.
Bilateral	2	1	2	4	Nil
Cornual block — 9					
Bilateral	Nil	2	2	Nil	Nil
Fimbrial block — 2					
Unilateral block — 20	Nil	5	4	10	Nil
Bilateral spill — 24	Nil	Nil	3	20	Nil
Unilateral Cor. block with	Nil	1	Nil	2	Nil
Contralateral fimbrial block — 4					

The false negative rate was 10.76% and the false positive rate was 26.15%. Thus HSG & laparoscopy were in complete agreement in 64% cases.

No patient had any complication due to HSG or laparoscopy.

#### Discussion

The HSG had no demonstrable pathology in 28% cases in our study. Percentage of normal HSG quoted by Duignan 55%, Swolin & Rosenkrantz 53%, Kierse & Vanderwallen 50%, Hutchins 48% Seth and Krishna 42%. The incidences of bilateral tubal block as quoted by Duignan 28%, Kierse & Vanderwallen 18%, Hutchins 8%, Seth & Krishna 48%, and in the present series it was 24.56%. Endometriosis was detected by Duignan in 7.4%, Kierse & Vanderwallen in 16%,

Hutchins in 5.1% and by Seth & Krishna in 1%. No case of endometriosis was detected by us. Genital T.B. proved by laparoscopy was 1.16%, 14% and 16%, by E1 Minawi, Seth & Krishna and the present study respectively. Bilateral tubal block was found in 16.91% in laparoscopy as compared to 24.56% on HSG. Swolin & Rosenkrantz and Seth & Krishna reported comparative patencies in HSG & laparoscopy as 53 & 62% and 42 & 56% respectively. Pelvic adhesions were detected in 4 & 28/5 in HSG and laparoscopy respectively. Duignan found the same as 2.2 & 24.7%. The agreement between HSG and laparoscopy in the present series is 64%. The percentage of agreement quoted by Duignan 60%, Swolin & Rosankrantz 63% Kierse & Vanderwallen 76%, Hutchins 70% and Seth and Krishna 74%.

Conclusion

In conclusion it can be said that though HSG remains the preliminary procedure of choice, the investigative work up of an infertile woman is incomplete without laparoscopy. The two procedures are complementary to each other.

References

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Table with 5 columns and 6 rows of data, likely a comparison of HSG and Laparoscopy results. The text is mirrored and difficult to read.

The HSG test is indicated in the present study... The agreement between HSG and Laparoscopy in the present study is 84%... The agreement of agreement quoted by Duignan et al (1972) is 84%... The agreement between HSG and Laparoscopy in the present study is 84%.

The false negative rate was 10.7% and the false positive rate was 28.1%. Thus HSG & laparoscopy were in complete agreement in 84% cases. No patient had any complication due to HSG or laparoscopy. The HSG test is indicated in the present study... The agreement between HSG and Laparoscopy in the present study is 84%.