



RETROSPECTIVE ANALYSIS OF HYSTEOSALPINGOGRAPHY FINDINGS IN
PRIMARY AND SECONDARY INFERTILITY: A TERTIARY CARE PERSPECTIVE

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KEYWORDS :

INTRODUCTION

- Infertility, defined as the inability to conceive after 12 months of regular, unprotected intercourse, is a global health concern affecting 8-12% of couples worldwide¹.
- It is classified into primary infertility, where conception has never occurred, and secondary infertility, where there has been a previous pregnancy but the couple is unable to conceive again².
- Hysterosalpingography (HSG) is a crucial procedure for assessing uterine abnormalities and tubal patency, which are major causes of infertility³.
- The diagnostic value of HSG lies in its ability to provide real-time visualization of the uterine cavity and fallopian tubes, thereby aiding in the identification of conditions like tubal blockages, adhesions, and uterine anomalies⁴.

Objectives

- To evaluate the HSG findings in women with primary and secondary infertility.
- To estimate the prevalence of uterine and tubal pathologies in a tertiary care setting.

MATERIALS AND METHODS

- Study Setting:** A rural tertiary care teaching hospital in Sullia taluk, Karnataka, India
- Study Period:** July 2023 to July 2024
- Study Design:** Retrospective study
- Sample Size:** All cases who underwent for evaluation of infertility during the study period. A total of 96 infertile women were included.
- Sampling technique:** Universal sampling
- Methodology:** Data from 96 patients regarding demographic information and HSG findings, were retrieved from medical records. HSG was performed using standard techniques to assess uterine cavity abnormalities and tubal patency.
- Ethics Approval:** Ethical approval was obtained from the Institutional Ethics Committee.
- Statistical Analysis:** The data was entered in Microsoft Office Excel 2007 and IBM SPSS version 21 was used for analysis. The data is represented in the form of frequencies and percentages.

RESULTS

Table 1: Type Of Infertility In The Study Population

SNO.	TYPE OF INFERTILITY	NO. OF PATIENTS	PERCENTAGE
1	Primary Infertility	83	86.46%
2	Secondary Infertility	13	13.54%

Table 2: Duration Of Infertility In The Study Population

SNO.	DURATION	PRIMARY INFERTILITY	SECONDARY INFERTILITY
1	1 – 5 Years	46 (55.42%)	3 (23.07%)
2	6 – 10 Years	21 (25.30%)	8 (61.53%)
3	> 10 Years	16 (19.27%)	2 (15.38%)

Table 3: Incidence Of Infertility Stratified Based On Age Of The Patients

SNO.	AGE GROUP	PRIMARY INFERTILITY	SECONDARY INFERTILITY	TOTAL
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1	Upto 20 Years	10 (12.04%)	1 (7.69%)	11 (11.45%)
2	21 – 25 Years	12 (14.45%)	2 (15.38%)	14 (14.58%)
3	26 – 30 Years	36 (43.37%)	5 (38.46%)	41 (42.70%)
4	31 – 35 Years	13 (15.66%)	4 (30.76%)	17 (17.70%)
5	35 and above	12 (14.45%)	1 (7.69%)	13 (13.54%)

Table 4: Tubal Findings And Peritoneal Spillage

SNO.	FALLOPIAN TUBE PATTERN	NO. OF PATIENTS
1	Normal tubes with bilateral spillage	79 (82.29%)
2	Bilateral tubes blocked	11 (11.46%)
3	Right tube block with left spillage	2 (2.08%)
4	Left Block with right spillage	2 (2.08%)
5	Right hydrosalpinx	1 (1.04%)
6	Left hydrosalpinx with block	1 (1.04%)

Table 5: Uterine Cavity Findings

SNO.	UTERINE CONTOUR AND SIZE	NO. OF PATIENTS
	Size	
1	> Normal	90 (93.75%)
2	> Small	3 (3.13%)
3	> Large	3 (3.13%)
	Shape	
1	> Normal	90 (93.75%)
2	> Unicornuate	2 (2.08%)
3	> Bicornuate / Septate	4 (4.16%)
	Surface	
1	> Smooth	94 (97.91%)
2	> Filling defect	2 (2.08%)

DISCUSSION

- Over the past decade, there has been a notable increase in the number of women seeking infertility evaluations at fertility clinics^{5,6}.
- This highlights the importance of adopting less invasive management strategies for these cases.
- Hysterosalpingography (HSG) is a straightforward, minimally invasive, and cost-effective method.
- This study provides valuable information and emphasizes the benefits of HSG, making it a highly useful tool for diagnosing and managing infertility⁷.
- In our research, 70% of the patients experienced primary infertility, while 30% had secondary infertility, which aligns with findings from the study by Saini et al⁸.
- Furthermore, about 83% of the patients exhibited bilateral tubal patency with spillage, comparable to the results from the study by Kumari TM et al⁹.

CONCLUSION

- There was a significant incidence of tubal disease among the women presenting with infertility, which may potentially be linked to underlying infections or inflammatory processes.
- Hysterosalpingography remains a safe, minimally

invasive, cost-effective, and valuable diagnostic tool in the evaluation of such cases.

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