



A Comparative Study on Efficacy of HSG and Hysteroscopy in Diagnosing Tubal Block in Primary Infertility

Authors

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Abstract

This study was aimed to find the efficacy of the modern hystero-laproscopy (DHL) over hysterosalpingogram (HSG) in primary infertility patients with bilateral tubal block.

Materials and Methods: *this study was conducted at Sudha Sunder hospital, Kanyakumari, India from Jan 2019 to June 2019 after institutional ethical clearance. Women with primary infertility who were diagnosed with bilateral tubal block through hystero-salpingogram were taken into this study. Hysteroscopy was done in these patients and the findings were noted, treated accordingly.*

Results: *57 primary infertility patients who were diagnosed to have bilateral tubal block in HSG were taken for the study. DLH was done for all these patients. Of these 33 patients had bilateral tubal block and the same was recanalized in all except one patient due to PID, 7 patients had unilateral tubal block and all were recanalized except one also due to PID and the rest 17 patients had a normal study.*

Conclusion: *this study suggests the superiority of diagnostic hystero laparoscopy over the routine, cost effective HSG which can be done as an OP procedure. Though DHL is an invasive procedure, it is 100% accurate compared to HSG that's only 60% reliable in case of diagnosing tubal blocks.*

Introduction

The WHO has defined infertility as “a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse.”⁽¹⁾

Infertility is one of the most prevalent problems as a result of rapid urbanization and related family nuclearization associated with it. In the Indian population around 15 percent of couples around are deemed infertile. The stigmatization it carries in India makes it a dreadful one.⁽²⁾

The basic workup while investigating the infertile couple after counselling along with history taking includes semen analysis, tests for ovulation and tests for tubal patency.⁽³⁾

Hysterosalpingography (HSG) plays an important diagnostic role in finding the cause of infertility and in deciding the line of management. HSG is a simple, safe, and minimally invasive radiologic procedure to visualize uterine cavity and tubes after contrast enhancement.⁽⁴⁾ Though pelvic sonography and HSG are good enough for excluding gross intrauterine pathology, subtle changes which influences fertility, can be missed. These subtle changes are better picked up on magnification with hysteroscopy.⁽⁵⁾ Hysteroscopy involves inspection of uterine cavity and the cornual ends of the fallopian tube with an endoscope inserted through the cervix, this when

combined with laparoscopy yields more beneficial results.^(1,6)

Debate still continues on the role of HSG and hystero– laparoscopy in diagnosing the causes of infertility. This study is designed to compare the diagnostic value of HSG with hysteroscopy in the assessment of bilateral tubal block.

Aim

This study was aimed to find the efficacy of the modern hystero-laproscopy (DHL) over hysterosalpingogram (HSG) in primary infertility patients with bilateral tubal block.

Materials and Methods

This study was conducted at Sudha Sunder hospital, Kanyakumari, India from Jan 2019 to June 2019 after institutional ethical clearance.

Patient who consented were only included in this study along with primary infertility patients without hormonal changes, healthy partners and patients who were diagnosed with bilateral tubal blocks through HSG.

Patients who did not consent were excluded along with patients who had hormonal problems and unhealthy partners.

Women with primary infertility who were diagnosed with bilateral tubal block through hystero-salpingogram were taken into this study. Through history and physical examination was done in these patients along with blood investigations.

Hysteroscopy was done in these patients and the findings were noted, treated accordingly.

Results

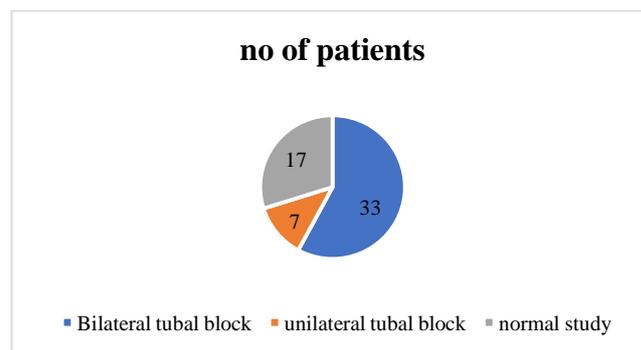
57 primary infertility patients who were diagnosed to have bilateral tubal block in HSG were taken for the study.

These patients had no hormonal imbalance and had healthy partners who had been tested for the same.

DLH results:

Of these 33 patients had bilateral tubal block and the same was recanalized in all except one patient

due to PID, 7 patients had unilateral tubal block and all were recanalized except one also due to PID and the rest 17 patients had a normal study.



This implies that HSG has 29% false positive result. HSG yields only 57% true positive results. Of the 40 patients with tubal block diagnosed in DHL, recanalization was done for all patients. Only 2 among them was a failure. Which suggests only a 5% failure rate in therapeutic abilities of DHL. These two patients had PID which was the reason for failure for recanalization.

Post-operatively was uneventful for all patients. Only 1 patient had mild discomfort post-surgery, others recovered uneventfully.

Discussion

Infertility is a serious problem to the couple and brings about family unhappiness and mental trauma and is a matter of financial burden. Among females, the most common cause is tuboperitoneal pathology accounting for 30%–35% cases followed by ovulatory dysfunction (20%–30% cases) and uterine pathology (15% cases). The gold standard for evaluating tuboperitoneal pathology is laparoscopy.^(1,4) We found that HSG is only about 60% effective in diagnosing tubal blocks in comparison to hystero-laparoscopy.

Now, the prevalence of PID in India ranges from 1% to 17%. Even subclinical PID is substantially associated with infertility and women with subclinical PID achieved 40% less pregnancies compared to women without the same. Tubal factor infertility is the foremost reason of infertility among female patients, the majority of which is due to PID.^(1,6) In our study, we had 2

cases of PID for whom recanalization of the tubal block was a failure.

The prevalence of genital tract TB in female ranges from 1% to 19% depending on the region. A study conducted in India found that more than 25% infertile patients (40 out of 150) had genital tuberculosis.^(1,5) Luckily, we did not have genital tuberculosis in our study.

The fact that HSG has a considerably high false-negative rate and a false-positive rate is a good argument to suggest that hysteroscopy represents an important complementary test in the work up of the infertile couple^(2,3) but when it is combined with hysteron-laparoscopy the accuracy is close to a 100%. DHL is not only diagnostic but also therapeutic, hence it can be used to treat patients then and there. The chances of failure of treatment even though present, is significantly minimal. Hence it is safe to say, HSG when complemented with DHL, is a great diagnostic and therapeutic tool.

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