



Role of Hysterosonosalpingography in Infertility

KEYWORDS

Infertility, hysterosonosalpingography , tubal patency test.

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ABSTRACT

Traditionally HSG was used as a tubal patency test. After development of laparoscopy, diagnostic laparoscopy has become gold standard as a tubal patency test in the evaluation of infertility patient. But as it is an invasive procedure it has its own limitation as being the first procedure in every patient. So in routine infertility patient hysterosonosalpingography may be used as a primary procedure in evaluating the uterine cavity and fallopian tubes by using sonography as it is a completely non invasive procedure without any complications. Not only it has a diagnostic value , it may also have a therapeutic value as many infertile patients conceive following this procedure

INTRODUCTION.

In infertility patient initially to evaluate the patency of fallopian tubes, HSG was done. It evaluated the uterine cavity and patency of tubes. It is still done by radiologist but it is sometimes very painful to the patient. As per Samantha m Pfeifer HSG is usually performed before performing a laparoscopy because it is less costly and less invasive.

Laparoscopy is gold standard in evaluating the tubes in an infertile patient but being a highly invasive procedure it is not primarily accepted by every patient. It has a value in evaluating the pelvic cavity for any pathology.

Hence with evaluation of sonography, hysterosonosalpingography was developed as a very acceptable and noninvasive procedure for evaluation of tubal patency in an infertile patient with reasonable accuracy . in addition to its diagnostic value, it also has a therapeutic use in opening up of flimsy adhesions at fimbriae and resulting in subsequent pregnancy as seen in some patients on follow up. As per Vivian lewis in many practices sonohysterograms have replaced HSG for screening to assess for lesions in endometrial cavity and rule out hydrosalpinx for infertile patients considering IUI or IVF. It is quicker and less painful than HSG.

AIMS AND OBJECTIVES.

Aim of this study was to evaluate the efficacy of HSSG as a diagnostic tool for tubal patency test and its subsequent therapeutic value as determined by subsequent pregnancy.

MATERIAL AND METHODS.

This study was carried out on 39 patients of infertility from December 2013 to june 2015 at my hospital. All patients had either primary or secondary infertility. All aseptic precautions were done and pre op i.v. antibiotics were given to all patients. Pre-op USG was done to determine any pelvic pathology and any pre procedure free fluid in POD. Cervical dilatation was done and leech Wilkinson cannula was introduced into the cervical canal. 100ml sterile saline was infused through the cannula slowly. The resistance to the push of saline and any backflow was noted. In patients who had patent fallopian tubes the push of saline was smooth without any resistance and there was no significant backflow of saline. The procedure was also painfree. While in patients with blocked fallopian tubes, the push was painful, resistance was felt during pushing of saline and backflow of all saline was noted. In cases of patent fal-

lopian tubes, significant free fluid was seen in POD after the procedure which was absent in cases with blocked fallopian tubes.

According to Sylvia k Rosevear the procedure is not particularly painful and is essentially without risk. It fallopian tubes are patent than saline will spill into the peritoneal cavity.

As per william's gynecology several distending mediums have been described for HSSG including saline, lactated ringer solution and 1.5% glycine. They have found sterile saline is inexpensive and provides excellent imaging. Patients with tubal blockage have more discomfort as fluid cannot efflux through the tubes.

OBSERVATION AND DISCUSSION.

Table 1. PRIMARY AND SECONDARY INFERTILITY.

Primary infertility	Secondary infertility.	Total patients.
29	10	39

In my study out of 39 patients 29 were the cases of primary infertility and 10 cases were of secondary infertility.

Table 2. AGE DISTRIBUTION.

AGE	NO OF PATIENTS.
<20	2
21-25	18
26-30	13
31-35	6
TOTAL	39

In my study most of the patients were in the range of 21 to 30 years of age which is the age of maximum reproduction.

Table 3. PERIOD OF ACTIVE MARRIED LIFE. (AML)

Period of AML	<2	2-5	6-10	>10
No of patients	1	17	14	5

In my series active married life of patients was in the range of 2 to 10 yrs. 5 patients had more than 10 yrs of AML.

Table 4. HSSG FINDINGS.

HSSG FINDINGS.	NO. OF PATIENTS.
Push smooth, no resistance, no backflow, free fluid seen in POD	34
Push not smooth, resistance felt, slight backflow, minimal fluid seen in POD	4
Severe resistance, all backflow no fluid seen in POD	1

Out of 39 patients in 34 patients the flow of saline was smooth, no resistance was felt, there was no backflow of saline from uterine cavity and post procedure free fluid was seen in POD suggestive of patent fallopian tubes. In 4 patients the push was difficult slight resistance was felt some saline was pushed in and some came out as backflow. Post procedure showed minimal amount of saline in POD. These patients represented cases with some degree of tubal pathology and blockage. In one patient there was severe resistance to the flow of saline, it cannot be pushed all saline came back as backflow and there was no fluid seen in POD suggestive of blocked fallopian tubes. These patient was advised laparoscopy for full evaluation of the pelvis and tubal pathology.

Table 5. POST PROCEDURE PREGNANCY.

No of patients with patent fallopian tubes as seen in HSSG	No of patients conceived.
34	4

In my series out of 34 patients who seem to have patent fallopian tubes 4 patients conceived spontaneously on follow up upto June 2015.

There was not a single case of complications or any adverse reaction seen in my series except a few cases who complained of blood stained vaginal discharge after the procedure. Antibiotics were routinely given to all patients.

RESULTS.

Out of 39 patients studied, 4 patients conceived spontaneously after the procedure on follow up. This suggests that HSSG was not only helpful in diagnosis of tubal patency but it is also having some therapeutic value as some patients spontaneously conceive after this test. It may be helpful in releasing minor filmy adhesions by the process of hydrodissection and this may cause fimbrial dilatation and remove adhesions which may result in subsequent pregnancy. Its hydrodissection may also open up filmy adhesions inside the tubal lumen resulting in establishing patency of tubes and resulting pregnancy.

CONCLUSION.

HSSG with saline infusion is a relatively simple, safe and noninvasive procedure to confirm the patency of fallopian tubes in an infertility patient. It has not only diagnostic value but also it may have some therapeutic value as few patients conceive spontaneously after the procedure. It may serve as a primary procedure for evaluating the patency of fallopian tubes in all infertile patient if they are not ready for laparoscopy. It may suggest that few patient who seem to be having blocked fallopian tubes for further assessment by diagnostic laparoscopy.

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