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Diagnostic Criteria for Bandhyatva (Infertility) through Hysterosalpingography (HSG) – An Ayurvedic approach for procedural correction

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ABSTRACT

This study is being carried out with the aim to get the effect of Uttarbasti on Bandhyatva w.s.r. to tubal blockage. Hysterosalpingography (HSG) is selected as a screening investigation to diagnose the tubal blockage. HSG has been performed in total 51 cases till date which has shown the incidence of tubal blockage in the same range (34%), as it is known to be responsible for infertility (30%-40%). Bilateral tubal blockage was diagnosed in 14% infertile women while unilateral tubal blockage was found in 19.6% infertile women. With the help of HSG many other uterine anomalies were also detected as the responsible factor or the associated factor of infertility. Problems and complications which arose during and after procedure of HSG were documented and some Ayurvedic drugs and procedures were used to correct them. Most of the problems subsided and no significant complication was reported during the follow up period of one month. Though HSG is a part of the main study which is regarding the Uttarbasti on tubal blockage, so many valuable experiences were gained by performing the HSG. These experiences are significant and worth publishing. The small sample data of 51 cases collected in last 07 months is present here, but there is a definite possibility of the enhancement of knowledge and collection of new facts in due course of study.

Keywords: Bandhyatva; Tubal blockage; Hysterosalpingography; Uttarbasti.

INTRODUCTION

'Bandhyatva' i.e. infertility is one of the commonest problems which an Ayurvedic gynaecologist, rather any gynaecologist has to face throughout the practice. Tubal blockage is an important causative factor accounting for 30-40% of infertility in women. The most despairing thing about the tubal blockage is that still there is not a very reliable treatment for this problem in modern sciences. Very few gynaecologists perform tubal microsurgery, but the possibilities of recurrence and ectopic pregnancy are always there, as a consequence.

Uttarbasti, a minor Ayurvedic operative procedure is found to act very nicely upon tubal blockage and the most significant thing is that it doesn't have any side effect or complication, if performed cautiously. But still we don't have any data about the effect of Uttarbasti on tubal blockage to prove its significance nor, we possess any database criteria for

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selection of the patients or the medicine. Hence, the effect of Uttarbasti on tubal blockage has taken as a clinical study as a primary step to overcome such problem and to determine the role of Ayurveda for well-being of society by participating to cope-up the problem of increasing infertility.

As the tubal blockage is generally neglected or is evaluated at last by most of the gynaecologists, may be because of its complex nature, it was mandatory to start a reliable investigation in institute before working on it. HSG was selected as the investigative procedure for this over SSG and laparascopy (chromopertubation), because of the least false negative and false positive reports. Apart from this, it can be performed by an Ayurvedic gynaecologist herself in an Ayurvedic institute and it is the cheapest investigation which can give the idea about other factors related to internal condition of uterus causing the infertility in addition to tubal blockage.

During the study, HSG was found very informative and useful procedure to evaluate the tubal blockage along with other causes of infertility. The data related to all the patients regarding HSG were collected. Ayurvedic measures were used to correct the problems which come during and after procedure and also to prevent the complications. Satisfactory results were achieved by using these Ayurvedic measures. So all the information about HSG, collected till date from 51 cases is present here .Though the study is still going on, there is possibility of expansion of the information and knowledge about this topic in future.

AIMS & OBJECTIVES

- To study the incidence of tubal blockage in infertile women with the help of HSG
- To determine the problems during procedure of HSG
- To evaluate the significance of Ayurvedic measures in correction of such problems

METHOD

The study is being carried out over a period of 07 months since October 2008 and is still continue in collaboration of SRPT department and Radiology department of I.P.G.T. & R.A., GAU, Jamnagar. Total 51 infertile patients were randomly selected from OPD and IPD of SRPT department without giving attention to primary or secondary infertility.

The following precautions and procedures were undertaken during HSG. Time – within 7 days of completion of normal menstrual period. Patients get admitted in ward 01 day prior to the procedure. Routine blood, urine, HIV, VDRL & HBsAg were done in every patient to rule out any active infection. Autoclaved all the instruments to be used for the HSG.

Steps of HSG

Emptying of bladder. Patient lies in dorsal position at the edge of the X-ray table. Maintain Aseptic and antiseptic measures- Prevent contamination by wearing autoclaved apron, mask, cap and gloves, Cleaning of vulva and vagina with antiseptic solution, etc. Expose the cervix, clean it and catch it with Allis' forceps. Sounding of the uterus. Leach Wilklinson's Cannula is filled with radio opaque dye (Urograffin 76%) from the syringe attached to it proximal end. Cannula is introduced in the cervix and is firmly pressed at external os. Patient shifted upwards with cannula in position, so that pelvis comes to lie over the x-ray source. 5 to 10ml of dye is slowly injected in the uterus and it is watched on the x-ray. Cannula is kept in place till wet plates are examined and are found satisfactory.

Complication of the HSG

Immediate complications-pain, bleeding, Hypersensitivity to dye, regurgitation, vasovagal shock late complications– PID, Endometriosis.

RESULTS AND OBSERVATIONS

The age of the study population ranged 22yrs to 38yrs. Among them 37 are primary infertile and 14 are suffering from secondary infertility.

Table 1. Tubal block findings of the study population

Findings	No.of cases	Percentage	
Unilateral block	10	19.6%	33.3%
Bilateral block	07	13.7%	

Table 2. Unilateral tubal blocks-distribution according to the site of block

	Left tube	Right tube
Cornual end of tube	02	02
Mid tube	02	01
Fimbrial end of the tube	02	01

Table 3. Bilateral tubal blocks-distribution according to the site of block

	Left tube	**Right tube**
Case no 01	Mid tube	Fimbrial end
Case no 02	Fimbrial end	Fimbrial end
Case no 03	Mid tube	Mid tube
Case no 04	Fimbrial end	Fimbrial end
Case no 05	Corneal end	Fimbrial end
Case no 06	Fimbrial end	Fimbrial end
Case no 07	Cornual end	Fimbrial end

Table 4. Other pathologies

Finding	Cases	Percentage
Bicornuate Uterus	02	4%
Unicornuate Uterus	02	4%
Uterine hypoplasia	02	4%
Irregular cavity	01	2%
Uterine fibroids	02	4%
Uterine polyp	01	2%
Tubo ovarian mass	01	2%
Dilated tube	03	6%
Beaded appearance of tube	02	4%
Calcified node in pelvis	01	2%

Table 5. Problems observed in HSG procedure during study

Problems	No. of cases
Difficulty in pre procedure	
Anxiety	16
Hypersensitivity to Atropine	01
Difficulty in visualizing cervix due to	
Fatty labia majora covering the introitus	03
Laxed vaginal wall	06
Pain due to vaginismus	04
Difficulty to get an appropriate position by obese patients	02
Difficulty in catching anterior lip of Cx	
Very short cervix	01
Anterior lip not well developed	02
Problems while introducing cannula	
Pinhole external os	04
Stenosed cervical cavity	02
Stenosed internal os	05
Acute anteverted / Retroverted uterus	07
Moderate to severe pain	06
Difficulty while introducing the dye	
Problem in pushing dye against resistance in case of B/L tubal blockage or some other obstruction	05
Pain when dye reaches to peritoneum	02
Leaking out of dye	04
Difficulty to determine volume of dye to be introduce	03

Table 6. Complications associated with HSG

Complications	No. of cases
Complications on pre procedure	
Hypersencitivity reaction to Atropine	01
Complications after procedure	
Pain	04
Bleeding P/V	02
Genital tract infections	00
UTI	00

Ayurvedic measures which were applied to overcome the problems during the procedure

General Measures

- Dashamoola kwatha ½ cup BD was given from 1st day up to last day of the menstruation.
- Mansyadi kwatha ½ cup BD was given for 3 days before performing HSG
- Panchavalkala kwatha yoni prakshalana
- Snehana of Bala Taila on lower abdomen and back just before the procedure
- Nādi Sweda on lower part of the body soon after Snehana

Specific Measures

- Intra uterine Uttara Basti of 5 ml.SAHACHAR TAILA was done for the period required,before the procedure in patients who came with reports of failed HSG as a consequence of cervical stenosis, stenosed os,Acute anteverted or retroverted uterus.
- Special procedure of uttarbasti was used in such type of cases. This uttarbasti was performed with the help of Leech wilklinson canula . canula was introduced upto maximum possible extent and oil was pushed. Canula was taken out just after pushing the oil. It resulted to open the os , to reduce stenoses and also gave some correction in cases of acute retroversion and anteversion.
- Correction of pinhole os was done by the help of gradual dilatation and uttarbasti over a period of few days after cessation of menstruation and the HSG was performed in the next cycle in such patients.

Post procedure Ayurvedic measure

Chandraprabhavati 2 tablets BD for 5 days was given

Shanka vati 2 tablets SOS was given as an anti spasmodic when required.

Raktastambhaka yoga, containing Nagakesara, Khadira, Sphatika & Gairika in equal parts along with Ashok & Lodhra Churna was given to the patients who complained of bleeding. Dose & duration was as per the requirement.

Follow up - 01 month up to cessation of next menstruation.

DISCUSSION

In this study, women suffering from tubal blockage were found 34% out of all the infertile women selected randomly, which resembles the incidence of tubal blockage in infertile population, i.e. 30-40%. The 14% patients were suffering from bilateral tubal blockage, which makes their scope of getting pregnancy to 0%. As it is quite a significant percentage, it becomes our responsibility to diagnose them and to treat them up to our maximum possible extent. The 19.6% patents were suffering from unilateral tubal blockage, which though, not makes conception impossible for them, but definitely reduces its possibility. Here, it is interesting to note that two patients conceived just after getting their tubes open which were treated with the 02 cycles of intrauterine Uttar Basti for unilateral blockage. They conceived after 6 years primary infertility and 8 years secondary infertility respectively.

Data regarding the site of block (Table 02 and 03) are also collected, which may show their significance after finishing the main study which is regarding the treatment of tubal blockage by uttarbasti. HSG was also proved very beneficial to diagnose the other uterine pathologies which were undiagnosed until then. It helped to get the accurate cause of infertility in those cases and led to the path of correct management.Two cases were suspected of genital tuberculosis because of beaded appearance in tubes.

They were confirmed by other specific investigations and now they are under ATT. As both the cases were undiagnosed until HSG was performed, it again proves the significance of this investigation to get the exact cause of infertility. HSG, though one of the most significant investigation of infertility, is not that much popular now a days. One of the most important reasons is that there come so many problems and complications during and after procedure

and sometimes make the procedure failed even. So, an effort was made to document those problems (table 05) as well as to correct them within maximum possible limit. For this purpose, some Ayurvedic drugs and procedures were used which gave good results.

Dashamoola kwatha was given in aiming clearing of menstrual flow and pacifying the exaggerated vata during rajahkala because of its vatashamaka and rajahpravartana property. Normalized fuction of vata may reduce the possibility of endometriosis as a complication of HSG by preventing the regurgitation of blood through the tubes. No patient suffered from endometriosis or any symptom of it after the procedure. Anxiety reduces the compliance of patient and sometimes the confidence of performer too. Because of it, there occurs the voluntary contraction of muscles, i.e. vaginisimus, which leads to so many problems and sometimes makes the procedure failed even. Mansyadi kwatha for 3 days before HSG was given to those patients who showed features of anxiety or vaginisimus during the P/S and P/V examination, which is carried out in all the patients before selecting for HSG. And HSG was successfully carried out in all those patients.

Panchavalkala kwatha prakshalana was performed as an aseptic measure in all the patients just before the HSG. And it worked nicely, as no patient suffered from UTI, lower or upper genital tract infection during the follow up period after procedure. Snehana and Svedana were performed as a routine in all the patients to achieve good vatanulomana and vedanashamana to relax the uterine muscles and to prevent the pain as much as possible. It is important to note that pain itself becomes a cause of failed procedure by voluntary contraction of muscles. This is one of the factors why HSG was successfully performed in all the patients without using any modern analgesic drug. Two cases who came with the reports of failed HSG in established centers due to stenosed cervix, were selected for intra uterine uttarbasti before HSG. The procedure was successfully performed in both the cases.

Management implemented to the patients of pinhole os made HSG possible in those cases , which shows the importance of uttarbasti with the dilatation measures. Chandraprabha vati was given to all patient after procedure, as it is well known for its anti-inflammatory property, esp. regarding the urogenital tract. It may be one of the cause why any post procedural urogenital infection was not reported in any case. Shankha vati was used as an antispasmodic to the cases who reported pain after procedure and pain was subsided in all the cases. Drugs which were used to check the bleeding gave good results and no need of allopathic treatments and recurrences were reported on those. After giving the inj. Atropine, one patient suffered from hypersensitivity like reaction (Table 6). She was diagnosed as suffering from moderate atropine hypersensitivity by the Modern Physician of I.P.G.T. & R.A. and was referred to higher centers for further management. It again proves the Ayurvedic approach of different Prakriti of different individuals and helps to establish the fact that neither the diagnostic nor the curative measures can be same for all the persons. It also shows that even the life saving drugs like atropine may become harmful in certain circumstances, so care must be taken while using such drugs.

CONCLUSION

Tubal blockage is still a very important causative factor of Bandhyatva or infertility. And it is proved by this study that the infertile women coming to an Ayurvedic gynaecologist possess this problem in the same extent as it is supposed in whole the infertile population. Hysterosalpingography can be successfully performed to investigate tubal blockage and many other causes of infertility, if care is taken before, during and after procedure. It is important to know and to be prepare for the problems which can come during and after procedure. Some of the minor Ayurvedic procedures and Ayurvedic drugs definitely play important role to negotiate these problems and also to prevent complications.

Problems during the procedure and complications after it can be minimized up to a significant extent by using Ayurvedic measures.

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