



Case Study

AYURVEDIC MANAGEMENT OF HYDROSALPINX: A CASE REPORT

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ABSTRACT

Infertility is caused by different factors like ovulatory, endometrial, tubal factors etc., and tubal factors are more responsible for infertility in patients of chronic pelvic inflammatory disease. Among the *Garbha Sambhava Samagri*, tubal factors come under *Kshetra Vikriti*. The present article a case report of female with primary infertility with the involvement of bilateral hydrosalpinx is presented. A female patient aged about 27 years approached the OPD of Prasutitantra and Striroga department, Arogyashala of National Institute of Ayurveda, Jaipur. Her initial complaints were severe pain before the onset of menstruation, intermittent on and off pain in left inguinal region, scanty menstruation and primary infertility. She was found to have huge hydrosalpinx in her USG findings. So treatment was planned accordingly and she was treated with Ayurvedic regimen consisting of *Shodhana* and *Shamana* therapy. *Yonivarti* was planned as *Sthanika chikitsa* along with *Triphala Guggulu* and *Godanti bhasma* as oral medications. Her USG was repeated after treatment which revealed hydrosalpinx was resolved possessing normal fallopian tube diameter.

INTRODUCTION

According to Ayurveda, health and harmony of four factors are essential for achievement of conception namely *Ritu*, *Kshetra*, *Ambu* and *Bija*. Here *Ritu* is appropriate season i.e., fertility window period, *Kshetra* is the *Garbhashaya* (uterus with adnexa), *Ambu* (mothers *Ahara rasa*- sap or essence of maternal food). Even in the allopathic system under female infertility endometrial factors, tubal factors, ovulatory factors etc., are considered as causative factors. Among these factors, fallopian tube plays an important role in the reproductive process as it is the place of fertilization of sperm and ovum, place of embryo for few days after conception and pathway of transport embryo^[1]. Any pathology in the fallopian tubes may leads to infertility.

According to the survey data, fallopian tube diseases are the main reason for infertility (accounting for 40%), while hydrosalpinx accounts for 10%-30% of various fallopian tube diseases^[2]. A study conducted on 120 couples who came for infertility by the Department of Obstetrics and Gynaecology, Seth G.S. Medical College and KEM Hospital, Mumbai, Maharashtra, India showed that Female factor is accounted for PCOD- 46.60%, Tubal factor 33.80%. Among infectious causes of tubal infertility pelvic inflammatory disease and tuberculosis were significantly associated ($P = 0.001$)^[3].

Hydrosalpinx can be considered under *Kshetravikriti* in Ayurvedic parlance, because fallopian tube is the part of *Garbhashaya* according to Ayurveda. *Doshas* like *Kapha* and *Pitta* get vitiated due to the *Krimi* invasion of *Garbhashaya* or *Yoni*. Followed by, formation of *Putisrava* (pus accumulation) takes place in the tube, eventually adhesions formed in the tubal lumen.

Identified causes for development of Hydrosalpinx are chronic pelvic inflammatory disease, tuberculosis of genital tract etc. These infections initially cause Salpingitis, when they become chronic they cause Hydrosalpinx. Salpingitis leads to formation of adhesions, blockage, hydrosalpinx. Salpingocycosis

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accounts for 95% of ectopic pregnancy. The more severe the salpingitis, the more severe the adhesion may be, and is more difficult to cure. In patients of infertility Hydrosalpinx hampers the conception by reducing the implantation rate, consequently pregnancy.

Even the outcome of In vitro fertilization and Embryo Transfer (IVF-ET) is disappointing in patients with hydrosalpinx. Results of some research studies had shown that the presence of Hydrosalpinx can reduce implantation rate and clinical pregnancy rate of IVF-ET while increasing early abortion rate and ectopic pregnancy rate^[4]. Hydrosalpinx is probably causing these effects, due to mechanical erosion^[5], toxic effect on embryo and gamete^[6], and also by reducing the endometrial receptivity^[7]. Therefore, pre-treatment for Hydrosalpinx before attempting in-vitro fertilization is highly necessary. Current treatments for Hydrosalpinx mainly include ultrasound-guided hydrosalpinx aspiration, fimbria salpingostomy, proximal tubal ligation, and tubectomy^[8]. Hydrosalpinx aspiration and salpingostomy may cause high recurrence rate of hydrosalpinx and high ectopic gestation rate^[9]. It is not correct to go for tubectomy in infertility patients, though it can significantly improve the pregnancy outcome. Surgical interventions in hydrosalpinx can cause injury to the arteries of fallopian tube-mesovarium which may affect ovarian blood flow and reduce ovarian reserve function and superovulation response^[10].

The above described management of allopathic system given an overview that treating Hydrosalpinx is very difficult. In Ayurveda many kinds of *Stanika chikitsa* are described to manage all sorts of gynaecological disorders and one among them is *Yonivarti* (Vaginal suppositories). *Yonishodhanavarti* is one of the important *Varti* mentioned under *Yonivyapad* management, containing *Kushta*, *Madanaphala*, *Saindhava lavana*, *Puranaguda*, *Arkapallava*, *Chagamutra* (Goats urine)^[11]. Since it is aimed for *Shodhana* (cleaning or purification) of *Garbhashaya*, in hydrosalpinx also *Yonishodhanavarti* can be applied.

Drug Preparation

All the raw materials were purchased from Ayurvedic raw drugs supplier, got them authenticated by Dravyaguna department and processed into fine powders, except *Arkapallava* and *Guda*. There after these powders are mixed with *Arkapallava* and *Guda*, there after *Chagamutra* is added. Made into little finger shaped *Varti*, dried under shade.

Case Presentation

Patient Information

A female married patient S, residing nearby village of Jaipur aged about 27 years approached the OPD of Prasutitantra and Striroga department, Arogyashala of National Institute of Ayurveda, Jaipur. Her initial complaints were severe pain before the onset of menstruation, intermittent on and off pain in left inguinal region, scanty menstruation and primary infertility. Patient is of medium built and height.

Family and Social History

The patient had a family history of malignancy of mother. There was no family history of hypertension, diabetes, infertility. The patient had no history of urinary tract infections, vulvo-vaginitis.

Physical examination: Examination of all systems was found normal except reproductive system. On bimanual pelvic examination mild tenderness was found in left adnexal region. Per vagina speculum examination showed vagina and cervix were healthy.

Occupational details

The patient is a house-wife and her husband is doing small business. She belongs to middle class family, living in joint family with many responsibilities.

History of Past Illnesses

Since ten years the patient was suffering with pelvic inflammatory disease and undergone broad-spectrum antibiotic therapy repeatedly. After antibiotic therapy patient got some symptomatic relief, but clinically she developed salpingitis, followed by hydrosalpinx. In allopathic hospital laparoscopy, followed by lysis of adhesions done, due to infertility tube was not removed. She again developed pain abdomen before the onset of menses, due to this she had the dyspareunia also. Again she approached allopathic doctor, and undergone one month long antibiotic therapy, but no relief was found in Hydrosalpinx features on ultra sonography.

Data from diagnostic tests

Before treatment

The ultrasound (whole abdomen) report of the patient shown: dilated left fallopian tube measuring about 92 x 88mm and right fallopian tube dilated 16 mm on 15/10/2018. So bilateral hydrosalpinx was diagnosed.

Diagnosis

Based on the above history, examination and Sonography report her disease can be diagnosed as chronic pelvic inflammatory disease with bilateral hydrosalpinx.

After diagnosing the case patient was referred to allopathic doctor for further advised and management keeping in view the severity. The

allopathic doctor gave her anti-biotic therapy for two months, but on follow-up ultra sonography there was no much difference seen (USG report is not available, patient missed the report) and the patient was advised

to undergo laparoscopic salpingectomy. Thereafter patient approached our OPD back, seeking medical treatment and does not want loose tube to retain fertility.

Therapeutic Intervention

Internal medication: Duration of therapy: 4 months

S. No.	Aushadi /Drug	Matra/Quantity	Kalpna/Form	Kala	Anupana
1.	<i>Triphala Guggulu</i>	500mg x2	<i>Gutika</i>	B.D. 30 minutes after food	Lukewarm water
2.	<i>Godanti Bhasma</i>	500mg	<i>Bhasma</i>	B.D. 30 minutes before food	Normal water

Externally

Yonishodhanavarti measuring little finger dimension used as one *Varti* intravaginal application after passing the urine. First the patient was asked to lie on her back with thighs flexed, vaginal cleaning done with *Triphala* decoction, then *Yoni Varti* was inserted deep into vagina (Posterior Fornix). She was advised to lie down for 30 minutes in the *Upakramakakshya* of Prasuti department. After 3 hours, the *Varti* was douched with lukewarm water.

Next time onwards instructions were given to patient to apply on her own after washing the hand with anti-septic liquid alternate day. Total 07 *Varties* were applied over the duration of 14 days. *Varti* application started after cessation of menstruation and *Varti* regimen repeated in next cycle also. So total 14 *Varti* are applied to the patient.

Advice: Patient was advised to maintain hygiene, wear clean sun dried undergarments, clip fingernails, wash the vaginal area with warm water after every vaginal insertion of *Varti*, as well as after use of wash room, avoid spicy, fried, bakery items and fermented items and over eating, avoid mental stress and advised to take plenty of green leafy vegetables, simple food and milk. They were also advised to maintain abstinence during the duration of treatment and the follow up period.



Image shows the *Varti* in the process of preparation which was given to the patient

RESULTS

The Hydrosalpinx was diagnosed in October 2018, the patient consulted allopathic doctor and she was given antibiotic Cynomycin (Minocycline Hydrochloride) for about two months, then again she had undergone ultrasonography, showed the same findings (USG report missed by the patient). Thereafter allopathic doctor suggested her to undergo laparoscopic left salpingectomy. Then in the month of January 2019 *Yonivarti* (vaginal wick) and Ayurvedic treatment was planned.

During the first cycle application of *Varti*, patient complained profuse, purulent foul smelling discharges followed by *Varti* application and she was compelled to use sanitary pads also. Where as in second cycle scanty discharges were noted followed by application of *Varti*. After completion of two cycles Ultrasonography was repeated and fallopian tube dimensions were found to be reduced to normal size 10cm.

DISCUSSION

Hydrosalpinx can be considered under *Kshetrajavikriti* in Ayurvedic parlance, because fallopian tube is the part of *Garbhashaya* according to Ayurveda. *Doshas* like *Kapha* and *Pitta* get vitiated due infestation of *Krimi* in the genitalia like *Garbhashaya* or *Yoni*. Followed by, formation of *Putisrava* (pus accumulation) takes place in the tube, eventually adhesions in the tubal lumen. *Yonivarti* helps through *Sodhana*, *Vrana Ropana* and *Krimighna* properties. As it is stated in modern text books that hydrosalpinx is the result of complications of untreated Pelvic Inflammatory Disease. Infertility, Dyspareunia are the complications of chronic pelvic inflammation which occurs due to recurrent or associated pyogenic infections. *Yonivarti* expels *Dosha* and also controls the local infections. As we know transvaginal route has higher bioavailability as it bypasses liver metabolism. Vascular vaginal mucosa enhances absorption of drugs. *Vartis* are hygroscopic in nature and they absorb the cervical and vaginal discharges. *Varti* reduces the

dryness and denatures the bacterial colonization and it also maintains the pH. *Varti* exerts prolonged and long lasting effect in infections and dealing with their recurrence, helps to clear vagina and also provides the opportunity to recreate the optimum vaginal health^[12]. *Yonishodhana varti* containing ingredients like *Kushta*, *Madanaphala* etc., produce painless contraction in the uterus, fallopian tubes etc., and thereby expels out the purulent discharges that are present in fallopian tubes.

Triphala guggulu acts as anti-bacterial, anti-fungal, anti-septic, anti-oxidant, anti-inflammatory drug. *Triphalaguggulu* pacifies all three *Doshas* in the body and is extremely beneficial in removing toxins. It is a potent detoxifier too. *Godantibhasma* (anhydrous calcium sulfate) is having *Pittahara* and *Jvarahara* properties so worked as anti-inflammatory agent; thereby it helps in relieving inflammatory changes in fallopian tubes. Thus both drugs are helping to reduce the excess fluid in fallopian tube.

CONCLUSION

Hydrosalpinx is one of the emerging contributory factors for Infertility. In modern science well established treatments are there like antibiotics, surgery. But complete relief is not obtained and surgery causes permanent loss of fallopian tube. Since this is a case of primary infertility, antibiotics were given in the first phase by allopathic doctor, but were of no use. So this case was planned for *Yonivarti* along with supporting *Vranashodhana*, *Vrana ropana*, *krimighna* and *Pitta shamaka* drugs. The current study establishes that Ayurvedic in-situ therapies like *Yonivarti* are greatly helpful in prevention of surgeries on fallopian tubes and to retain them for future fertility.

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