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AYURVEDIC MANAGEMENT OF TUBAL BLOCKAGE: A CASE STUDY

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ABSTRACT

A woman will lead a blissful life after having a conception. Having a child completes the woman's life. But the inability to conceive will adversely impact a woman's life. Infertility has also been proposed as a major contributor to emotional problems and reduced quality of life. There are many factors causing infertility ovarian, uterine, tubal, cervical, and peritoneal factors. Among them tubal factors causing infertility account for about 25-30 % of all cases of infertility. Infections, abdominal surgery, and diseases such as endometriosis can cause scarring at the inner linings of fallopian tubes. STDS, past ectopic pregnancy and any previous abdominal surgeries may cause tubal blockage. The fallopian tube is the kshetra of Garbhadhan and is quite near to artava vaha srotas, as it carries the gamete before and zygote after fertilization. Correlating fallopian tubes with the artava vaha srotas, its block is compared with sanga srotodushti of this srotas. It is a vata-dominated tridoshaja vyadhi, where kapha can be another dominant dosha. Uttara vasti is a boon in treating blocked fallopian tubes. The drugs having vata kapha shamaka, tridoshagna properties, and drugs with sukshma, sara, katu, ushna, and pramathi properties help remove the blockage and restore tubal functions. In the present case study, both shodhana and samana chikitsa are adopted. The combination of kumari taila and kshara taila having lekhaniya and vata kapha shamaka property is proven beneficial in treating tubal blockage.

Keywords: artava vaha srotas, tubal blockage, utharavasthi.

INTRODUCTION

Pregnancy is a unique, exciting, and often joyous time in a woman's life, as it highlights the woman's amazing, creative and nurturing powers providing a bridge to the future. WHO along with the international committee for monitoring assisted reproductive technologies (ICMART) "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] There are many causes of infertility, as per AIIMS, about 10-15 percent of all married couples face fertility issues and about half of these result from abnormalities in the male partner. Tubal factor infertility is known responsible for about 25- 30 percent of all cases of infertility. Such cases include completely blocked fallopian tubes or either one blocked or tubal scarring. often tubal factor infertility is caused by pelvic infections, such as pelvic inflammatory disease or endometriosis, recurrent infections of the reproductive tract, scar tissues that form after pelvic surgery, or a history of tuberculosis or colitis. IVF is the last option in couples having infertility due to tubal block. In some cases, laparoscopic surgery can remove the blockage and improve fertility. But IVF techniques are expensive and present low accessibility and success rates of 20-35 % per cycle, but the likelihood of getting pregnant decreases with each round while the cost increases. Ayurvedic management of tubal block proves beneficial. The present article highlights the role of ayurvedic procedures that as Uttara vasti and ayurvedic medications in treating tubal block.

Artava vaha srotas:[2]

Here *artava* can be considered as menstrual blood

Acharya has not mentioned or explained the channels of transportation of menstrual blood.

According to *susruta:* a) Roots of the channels – the menstrual blood carrying channels which carry the menstrual blood out of the body during monthly cycles in a woman are two in number.

Their roots are located in *Garbhasaya:* uterus. *Artava vaahini dhamainis*: the arteries which carry the menstrual blood-carrying channels.

Symptoms of damage or injury to the menstrual blood carrying channels –*Vandhyatva* – infertility, *Maithuna ashaishnutaa* - intolerance to sex, difficulty or painful sexual intercourse, *Aartava naasha* – amenorrhoea If *artava* is considered as menstrual blood, the *artava vaha dhamini* shall be considered as those arteries which are supplying the uterine bed and endometrium. The cervix and vagina can also be taken as *aartava vahini dhamainis* because they appear like tubes or *dhamanis* and menstrual blood flows out through them during the onset of menstruation. If *artava* is taken as ovum, fallopian tubes or uterine tubes can be considered as the channels of transportation.,

FALLOPIAN TUBE PHYSIOLOGY :[3]

Fallopian tubes act as ducts for sperm, oocyte, and fertilized ovum for transport, in addition to being the normal site of fertilization. These functions depend mainly on three factors: tubal motility, tubal cilia, and tubal fluid. Tubal motility: Peristaltic contraction of the smooth muscle fibers in the tubal wall allows the gametes (the sperm and egg) to be brought together, thus allowing fertilization and subsequent transport of the fertilized ovum from the normal site of fertilization in the ampulla to the normal site of implantation in the uterus. This movement is primarily regulated by three intrinsic systems: the estrogen-progesterone hormonal milieu, the adrenergic-nonadrenergic system, and prostaglandins. Estrogens acting at receptors stimulate tubal motility, whereas progesterone, which activates b receptors, inhibits tubal motility. Before ovulation, contractions are gentle, with some individual variations in rate and pattern. At ovulation, contractions become vigorous and the mesosalpinx contracts to bring the tube in more contact with the ovary while the fimbria contracts rhythmically to sweep over the ovarian surface. As progesterone level rises 4-6 days after ovulation, it inhibits tubal motility. This may lead to the relaxation of the tubal musculature to allow passage of the ovum into the uterus by the action of the tubal cilia. The effects of estrogen and progesterone on oviductal motility and morphology are mediated through these steroids' receptors. The changes in receptor levels are critical in determining the functional state of the oviduct. Adrenergic innervations are thought to be

involved in regulations of tubal motility, particularly isthmic motility changes.

Tubal Cilia: There are fewer ciliated cells in the isthmus than in the ampullary portion of the tube, whereas they are most prominent in the fimbriated infundibulum. Ciliation and deciliation are continuous processes throughout the menstrual cycle. Ciliation is maximum in the periovulatory period, particularly in the fimbria. Estrogen enhances the process of ciliation, whereas progesterone inhibits it, so significant deciliation occurs in an atrophic postmenopausal tube. Ciliary activity is responsible for the pickup of ova by, the fimbrial ostium and movement through the ampulla, as well as the distribution of the tubal fluid which supports gamete maturation and fertilization and facilitates gamete and embryo transport. The close approximation between the ovary and fimbria is likely to be important for ovum pickup, although, transperitoneal migration has been reported. The importance of ciliary activity is affirmed by the tubal dysfunction seen in associations with the deciliation of salpingitis. Tubal Fluid: Tubal fluid is rich in mucoproteins, electrolytes, and enzymes. This fluid is abundant in midcycle when gametes or embryos are present and may play an important role during fertilization and early cleavage. Fluid in the tubes is believed to be formed by (i) selective transudation from the blood and (ii) active secretion from the epithelial lining. The rate of fluid accumulation is 1-3 ml/24 hr and the rate of production is increased significantly around the time of ovulation. Tubal disorders: Pelvic inflammatory diseases, Ectopic pregnancy, Salpingitis isthmic nodosa, Neoplasms of the fallopian tube. While treating a tubal block case, it's essential to restore the normal physiological function of the fallopian tube which is explained above to beget healthy pregnancy.

CASE PRESENTATION

CASE HISTORY

The 30 years old female patient, is a housewife by occupation. Her chief complaint was a failure to conceive in the last three years of active married life, visited OPD of Striroga and Prasuti tantra for ayurvedic treatment. The patient was examined thoroughly. The patient has Histosalpingography (HSG) report showing bilateral tubal blockage.

History:

No significant past medical history. Menstrual history: menarche at the age of 13 years., Menstrual cycle :4-5 days/35-40 days. regular, moderate flow, dysmenorrhea present. Physical examination revealed pulse, blood pressure, and temperature within normal limits.

Gynecological examination:

Per speculum- cervix healthy. No abnormal discharge was seen., Per vagina – uterus anteverted mobile, normal size. All fornices free, mobile.

INVESTIGATIONS:

CBS, ESR, and urine examination revealed no significant abnormality. The thyroid function test was normal. The husband's sperm count was normal.

HYSTOSALPINGOGRAM: Bilateral tubal block

Chikitsa:

Shodana and *shamana chikitsa* are planned. *Uttara basti* with *kshara taila* 2ml and *Dhanvantara taila* 3ml is administered for three days, after menstrual cessation. The same procedure was carried out for two consecutive cycles. After that *phala ghruta uttarbasti* 5ml is administered for three days after the menstrual cessation. *Phala ghruta Uttara basti* is done for another two consecutive cycles.

***Uttara basti*:**

Procedure

The procedure must be carried out in an aseptic environment. Before *Uttara basti* the patient has given *anuvasana* and *asthapan vasti*. At first, the patient was asked to empty the bladder. The patient is placed in the lithotomy position. Antiseptic swabbing was done., Sim's speculum is introduced., and the Anterior lip of the cervix is held with vullsellum., Uterine sound is passed to dilate the internal os.

The medicated *taila* of the required quantity is instilled into the uterine cavity with an IUI cannula, attached to a 5 cc syringe. *Yoni prakshalana* was done before *Uttara basti*. and the entire procedure is carried out in the aseptic condition. *Paschat karma*: The patient is advised to take a rest with head low down for better absorption of the drug and kept under observation for an hour to note any complications.

Vitals are checked.

Shamana Chikitsa: *Shatavari ghruta* 10 ml BD, *Ashokarishta* 15 ml BD advised for four consecutive cycles.

DISCUSSION

Kumari taila :[4]

Kumari has many therapeutic actions including anti-inflammatory, antioxidant, antifibrotic, antibacterial, and diuretic.

It is a vata Pittaghna and has karmas such as bhedana, vatahara, krimighna. Wound healing action: glucomannan, is a mannose–rich polysaccharide, and gibberellin, a growth hormone interacts with growth factor receptors on the fibroblasts thereby stimulating its activity and proliferation, which in turn increases collagen synthesis. keeps the wound moist, increase epithelial cell migration and more rapid maturation of collagen. There will be an increase in the granulation tissue of the healing wound. Anti-inflammatory action: c glycosyl chromone was isolated from gel extracts. It inhibits the cyclooxygenase pathway and reduces the prostaglandin E2 pathway. Anti-bacterial action: both gram-positive and gram-negative bacteria have been inhibited by the extract of aloe vera.

Antiviral action: the action may be direct or indirect. Indirect action is due to stimulation of the immune system and direct is due to anthraquinones. The anthraquinones alone activate the various enveloped virus.

Antioxidant action: glutathione peroxides activity, super oxidase dismutase enzymes, and a phenolic antioxidant were found to be present in the extract of kumari, which is responsible for antioxidant action.

Antiseptic action: contains six antiseptic agents: lupeol, salicylic acid, urea, nitrogen, cinnamomic acid, phenol, and sulphur. [5]

Tila taila [6]: having antioxidant, anti-inflammatory, antibacterial, anti-viral.

Antioxidant action: vitamin E, Flavnoids, phenols give antioxidant properties.

Tannins present in oil make it antibacterial, antiviral, and astringent.

The methanolic seed extract of sesamum indicum at a concentration of 500 mg /ml showed anti-inflammatory action.

Properties of *tila taila* are *usna, vyavayi, Vishada, sukshma, tikshna, guru, vikasi, lekhana* and *sara guna*. It is *krimighna, Garbhasaya shodhana, yoni shula prasamana, Chinna, bhinna, viddha, Pichchita vrana ropana, vrana Shodaka, vrana pachaka* .[5]

Bhringaraj [7]*: vata kapha shamaka, krumihara, kushtahara, sophahara, vishaghna* .

Sotha hara, visha hara, and *Krumi hara* help in treating the fibrosis and inflammation in the fallopian tube. Having antiviral, antibacterial, antioxidant, anti-inflammatory, antifibrotic, and antihaemorrhagic action.[6]

Anti-inflammatory action: inflammation occurs due to the activation of platelet activation factors and the release of pro-inflammatory mediators such as prostaglandins, kinins, tumor necrosis factors, and nitric acid. The extract of Eclipta alba has a potent inhibitor of the pro-inflammatory transcription factors.

Antioxidant action: hexane, ethyl acetate, ethanol and water extracts of Eclipta alba have antioxidant activity.

Anti-fibrotic action: echinocystic derivatives from the methanolic extract of eclipta alba shows anti-fibrotic activity.

Datura [8]:

Having insecticidal, anti-fungal, anti-bacterial, anti-inflammatory, and anti-spasmodic activities. Withanolides were isolated from datura metal which is a group of steroidal lactones, many of these compounds exhibit a variety of biological activities including anti-inflammatory, antioxidant, antitumor, and immune suppressive properties.

Antibacterial action: crude aqueous and ethanolic extracts of leaf, stem, bark, and roots of D. metal have antibacterial action in many species of bacteria such as E. coli, staphylococcus aureus, Klebsiella pneumonia.

Antioxidant action: aqueous extract of leaf, stem bark and roots of D. metal showed phytochemical and antioxidant action.

Kshara taila [9]*:*

Mulaka, Swarjika kshara, Yava kshara, Vida lavana, Samudra lavana, Saindhava lavana, Sauvarchala lavana, Hingu, Shigru, Mahaushada, Devadaru, Vacha, Kushta, Rasanjana Shatapushpa, Granthika, Musta, Juice extract of *Kadali, Beejapuraka swarasa,* Madhu

sukta Kshara is well established for its corrosive, ulcer healing and antibacterial properties. It is *tikshna* and *vata Pittavardhaka* by *karma*. Thus, it removes the outer fibrosis of the endometrium and helps in its rejuvenation. its ulcer healing property helps the inner lining of the tubes and uterus to heal. Another important content of *kshara taila* is a very potent *vata kapha shamaka* drug, which contains anti-viral, anti-bacterial, antioxidant, and anti hemorrhagic qualities.[8] These properties make the medicine more potent in removing chronic inflammation and fibrosis. Its *sothahara* and *vishahara* karma reduce the swelling and edema of the tube and render it a healthier atmosphere. *Kshara taila* helps in the scraping of the obstructing substance and also removes the endometrial lining of the tubes and uterus. *Kaphaghna* and *lekhana* properties help in clearing *Srotoavarodha.*

Phala Ghruta[10]: Vata pitta shamaka, rasayana and jivaniya.

Having *deepana, pachana, vatanulomana, vrishya, rasayana, balya,* and *brimhana* properties. *Phalaghrita* has anabolic and regeneration action on the whole of the genital tract and corrects the *agni* when it is given orally.

Ingredients: *triphala, Madhuka, katurohini, vidanga, pippali, musta, visala, katphala, vacha, meda, mahameda, kakoli, ksheera kakoli, sariva, priyangu, satapushpa, hingu, rasna, Chandana, jatipushpa, tugaksiri, sugar etc.*

Asokarishta [11]***:*** deepana, pachana, agni pradipti.

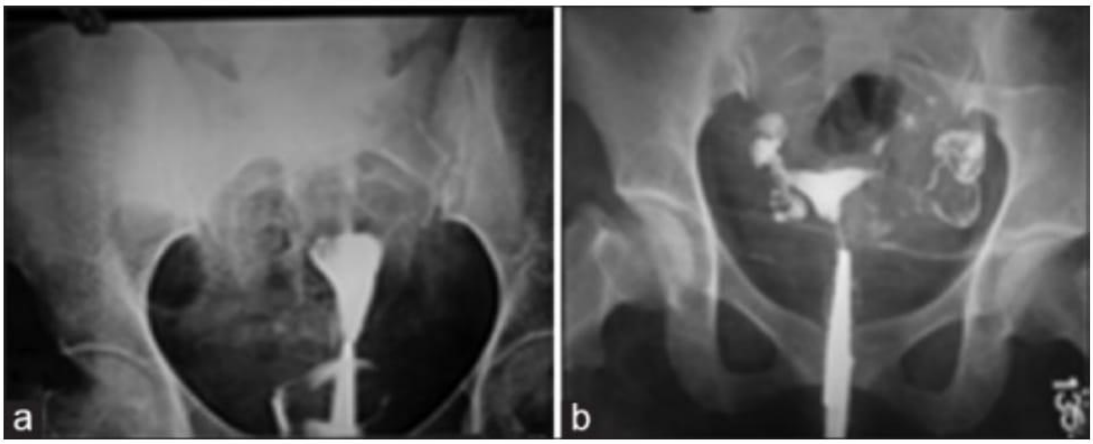
It provides hormonal imbalance, improves reproductive health, anti-inflammatory, analgesic, and rejuvenative property.

Shatavari ghruta [12]:

It has estrogenic action and improves folliulogenesis and ovulation. It helps in maintaining tubal motility through its estrogenic action. It is having antibacterial, antifungal, antioxidant, hepatoprotective, anti-inflammatory, and immunomodulant activity.

RESULTS

In this case, HSG was used as a diagnostic tool. HSG report shows normal fallopian tubes after four sitting of *Uttara vasti* along with oral administration of shatavari *ghruta* and *asokaarishta* for four months.



CONCLUSION

Uttara vasti with *kshara taila* and *kumari taila* and *shamana aushadh*a are *shatavari ghruta*, Ashoka arishta is proven beneficial in treating *artavavaha srotas avarodha*. The *shodana* and *shamana chikitsa* having *lekhana* and *vata kapha shamaka* properties are effective in treating tubal block.

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