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Case Report

Successful Outcome of Secondary Infertility with Multidrug Therapy in a Long-Standing Case of multisystem involvement

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Abstract

A case of secondary infertility with multisystem involvement is being presented herewith. Secondary infertility indicates previous pregnancy but failure to conceive subsequently. Numbers of secondary infertility are growing day by day. Many factors like age, unwholesome lifestyle, disturbed schedule, diet, stress is accountable for it. Due to involvement of these all factors sometimes a female may expose to multiple metabolic disorders resulting into infertility. **Aim:** To study the outcome of Ayurvedic treatment in management of secondary infertility. **Objective:** To access the role of Ayurvedic management in secondary infertility. **Methodology:** It is a single case study of secondary infertility due to multiple metabolic disorders. **Case description:** A female aged 31years, had pain during menstruation and regular cycles with history of left tube removal due to ectopic pregnancy visited for wants to conceive. She had history of treatment at various private centers and had multisystem metabolic disorders. She was advised Ayurvedic oral medications along with *yogabasti*. Outcome: After Ayurveda interventions she conceived. **Conclusion:** Ayurvedic management by improving the health and reproductive ability of a woman may help to conceive. The probable mechanism for the efficacy of multidrug therapy in multisystem disorders gives ray of hope to numerous.

Keywords: Infertility, Conception, Menstrual Cycle, Hydrosalpinx

Introduction

Infertility is clinically defined as one year of unwanted non-conception with unprotected intercourse in the fertile phase of menstrual cycles[1]. Infertility is thought to affect millions of individuals and couples worldwide often with devastating societal and health consequences, including social stigma, economic hardship, and poor physical and mental wellbeing[2]. The prevalence of infertility is increasing rapidly, affecting almost one out of every six adult people of reproductive age[3]. Due to the large population in the reproductive age group, and with the changing lifestyle, the country contributes to a large proportion of global infertility. Earlier estimates from the representative sample of the country shows that the prevalence of infertility is 17.9% and the proportion remained static in the last two decades[4]. The fallopian tube is an integral part of sperm attachment and fertilization, and its normal function is necessary for natural conception. Blockage of the fallopian tubes is a common disease and one of the leading causes of infertility[5]. Inflammation is the primary cause of oviduct obstruction, and infections of the reproductive system increase the source of infection. Infertile women with blocked fallopian tubes and hydrosalpinx account for 30% to 40% of the entire infertile population[6,7]. A woman's inability to conceive may result from a medical illness that disrupts her cycle in some way, whether by damaging her fallopian tubes, preventing her from ovulating normally or causing her hormone levels to fluctuate abnormally, there are several medical issues that can lead to infertility, Fertility in diabetic females is affected by various factors like lifestyle, hormonal imbalance, metabolic disturbance, gene expression and oxidative stress[8]

Patient Information

Married couple who were school teachers having one child 9 years back of the history of Caesarean Section, presented at Infertility clinic of All India Institute of Ayurveda with the complaint of inability to conceive. The semen parameters of husband were found to be within normal limits. The wife, aged 31years, had pain during menstruation and regular cycles. She had history of left tube removal due to ectopic pregnancy. History of treatment at various private centers was also found on inquiry. On detailed history it was observed according to the investigations of the patient, she was having multiple metabolic disorders mentioned in table no 1.

Clinical findings

The patient was obese with a body weight of 95 kg and BMI of 34.89. The findings obtained on per vaginal and per speculum examinations were bulky uterus, congestion on cervix, milky vaginal discharge and bilateral tenderness.

Investigations

Her CBC, TFT, FSH, LH were within normal limits, deranged parameters are mentioned below.

Table 1: CBC, TFT, FSH, LH parameters

Blood Glucose Level	Fasting – 120.1 mg/dl, PP – 179.8 mg/dl
HBA1C	6.6%
Serum Prolactin	30.8 ng/ml
AMH	0.4 ng/ml
TB Gold	1.544 IU/ml (positive)
USG	Hepatomegaly with Fatty Liver Grade -1 Liver size 16.42 cm.
HSG	Right Hydrosalpinx

Diagnostic assessment

On detailed evaluation of subjective and objective parameters patient was diagnosed as secondary infertility associated with multiple medical disorders affecting kshetra. From Ayurvedic perspective this condition could be considered as Vandhyatva associated with Avarana (enclosure) of Artavavavaha srotas (channel transporting Artava), Kapha Medoduṣhti, Srotorodha resulting karyahani as a result vandhyatva. Detailed analysis of her signs and symptoms showed the increase of Vata Kapha and reduction of Pitta. Considering all these factors, treatment principles were followed step by step by correcting aavarana, agnimandhya, medodushti, kshaya and vatashaman were followed in this case.

Therapeutic Intervention

Therapeutic interventions were initiated and executed as per table no. 2. As almost all the parameters were deranged, in view of fatty liver and raised sugar levels, it was planned to correct agnimandhya and aavarana. After correction of these, the line of management focused to correction of TB Gold being leading etiological factor of hydrosalpinx and tubal blockage. Although HBA1C and FBS were now within normal limits even then watch was kept upon FBS and PPBS. After two months yogabasti was advised. In consecutive months due to domestic cause patient was not able to visit hospital for Basti hence oral medications were advised.

Table 2: Therapeutic interventions [9,10,11,12,13,14,15,16,17,18]

First Visit	Hepatomegaly with Fatty Liver Grade -1 Liver size 16.42 cm. Raised Blood Glucose levels and HbA1C	Punarnavashtaka Kashaya in the dose of 10 ml twice in a day Chandraprabha Vati (500 mg) 2 tablets twice in a day Tablet M Liv 2 tablets 3 times in a day Shilajatvadi Lauh – 1 tablet twice in a day.
Second Visit	After correction of Fatty Liver and Sugar levels, medication focused on TB Gold were advised.	Tablet M Liv - 2 tablets 3 times in a day Trikatu Churna – 1 gm twice in a day Shilajatvadi Lauh - 1 tablet twice in a day Shringarabhra Ras - 1 tablet twice in a day Arvindasava 10 ml twice in a day with equal quantity of water after meals to be consumed Suvarnamalini Vasant Ras tablet 1 tablet twice in a day
Next Visit	After two months	Postmenstrual Yogabasti was advised comprising of Anuvasana basti with shuddha bala taila and asthapana basti with Dashmoola Erandamoola Kashaya with Shatapushpa kalka
	In same cycle after Ovulation	Brahmi Vati 2 tablets twice in a day Phala Sarpi 10 ml twice in a day were added along with above medications.
In next cycle	Preovulatory and post ovulatory oral medications planned to give as it was not feasible for a patient to visit hospital for Basti.	Punarnavashtaka Kashaya 10 ml twice in a day Kuberakshadi Vati 2 tablets twice in a day Kanchanara Guggulu 2 tablets twice in a day Shringarabhra Ras 1 tablet twice in a day. Shilajatvadi Lauh 1 tablet twice in a day.
	In same cycle after Ovulation	Brahmi Vati 2 tablets twice in a day Phala Sarpi 10 ml twice in a day were added along with above medications.
Next Visit	Urine Pregnancy test found positive	USG for confirmation of pregnancy was advised to be done after 3 weeks.

Follow-up and outcome – Patient conceived and confirmed by USG findings.

Discussion

The diagnosis was confirmed as Secondary infertility associated with multiple metabolic disorders. According to Ayurveda this disease is due to Avarana of Artavavaha srotasa as a leading contributing reason[19] The Nidana (causative factors) could be Avyayama (sedentary) and intake of excess Abhishyandi Ahara resulting into Kapha Medo Dushti and Srotorodha. As a result, movement of Vayu especially Apana vata gets clogged by kapha which in turn obstructs natural functioning of Artava. To break the Samprapti (pathogenesis) is the way to treat any disease. In this case it can be considered that involvement of Kapha and Vata as Dosha, Rasa, Rakta, Mamsa, Medas as Dooshya and Dushti of Rasavaha, Rakthavaha, Mamsavaha, Medovaha and Arthava vaha as responsible for etiopathology of the disease. Place of origin of the ailment is Koshta due to agnimandhya then the specific location of manifestation is artavavaha srotas – reproductive system. Sanga (blockage) and Granthi (cyst) are the types of Samprapti. The ultimate aim of the treatment was to release obstructed Vata and to enable its normal functioning in the Koshṭa especially in Kshetra(reproductive system). The obstruction was due to accumulated Kapha in the channels of Vata especially in Arthavavavaha Srotas. The treatment plan was adopted as Vatakapha Shamana with added benefits including kindling the Agni and alleviating the Moodhhavata. Punarnvashtaka Kashaya is the formulation containing 8 drugs or constituents in equal proportion. So, it is called Punarnava-ashtaka Kwatha with Punarnava as its main content or constituent. The eight drugs are Punarnava (Mula) Boerhavia diffusa (Linn.), Nimba(Twak) Azadirachta indica A.Ju, Patol (Patra) Trichosanthes dioica Rox, Kutki (Mula) Picrorhiza kurroa Royal ex Be, Sunthi (Zingiber Officinale Roxb), Guduchi(Tinospora cordifolia) , Devadaru(Cedrus deodara (Roxb)) and Haritaki(Terminalia chebula Retz). It is observed in a study that punarnavashtak Kashaya may be used as hepato protective and may be given for the treatment of Prameha. Chandraprabha vati is found to be effective in Prameha and PCOS too. Significant anti-diabetic activity and anti-hyperlipidemic property of Shilajatvadi Lauha was shown in a study. Kuberaksha Vati contains Latakaranj (caesalpinia Crista / Fever Nut) 4 parts and Rason (Allium Sativum / Garlic), Hingu (Ferula Narthex Bioss / Asafoetida), Shunthi (Zingiber Officinale / Dry Ginger) 1 part each.The other set of medicine, also Kapha Shamana with an added property of rasayana. Once the expected outcome from oral medications was obtained, it was decided to move to the next phase- therapies. It was decided to administer Basti as a next step because of the involvement of Vatadoṣa. Anuvasana basti was given with Shuddhabala Taila which is Vata Anulomana and Rasayana. It is explained by Acharya chakrapani as the *sneha* (unctuous substance) administered in minimal dose where it does not directly come in contact with *jatharagni* (digestive fire) and acts by its easy applicability and absorption without any complications. In *vandyatva* it helps in *srotoshodhana* and nourishment of *dhatus* (tissues) correcting *ksheena shukra*. Hence, the therapeutic intervention in the form of yogabasti was planned. Acharya charak has mentioned Brahmi as nerve tonic and kept in Balya and Prajasthapan gana of Mahakashaya. Hence may help in restoration of pregnancy by relieving stress of the patient and promotes healthy environment in artavavaha srotas. Phalasarpi being garbhasthapaka properties provides strength to uterus and helps to maintain pregnancy, hence was recommended in post ovulatory phase of a female to sustain the fertilization if happens. Hence, the treatment given to the patient was on the basis of ayurvedic principles & the outcome of treatment was encouraging.

Conclusion - This case report shows an insight into systematic learning how to manage Secondary infertility associated with multiple metabolic disorders effectively through Ayurvedic treatment modalities. The result obtained in this single case study is encouraging and the protocol followed here may be subjected for trial in larger samples.

Informed consent - Written consent was obtained from the couple for the purpose of publication of their clinical details.

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Conflict of Interest - None declared.

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