Effect of Ayurvedic Preconceptional Care as a Fertility Solution for a Couple Advised for IUI - A Case Report

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ABSTRACT
INTRODUCTION: Infertility synonymous to vandhyata can be understood as when the couple fails to conceive even after one year of unprotected intercourse. Infertility affects about 8-10% of the couples in the reproductive age and thus brings up psychological, social and physical suffering. According to Ayurveda, śuddha śukra, ārtava (healthy male and female factors), garbhāśaya (uterus), healthy body and mind are needed for a good conception. Hence a holistic approach is needed for the management of infertility.

CASE: This is a case report of a 33 year old female and 35 year old male having no issues since 2 years of unprotected intercourse with a history of abortion at the 5th week. All the relevant investigations were reported normal. They were repeatedly advised for IUI because both were above 30 years of age. Both the partners were given virechana (purgation) followed by internal medications to improve the health of the male and female factors and promote conception along with exercises, sūryanamaskāra, meditation and prāṇāyāma for three months.

RESULT: The patient conceived during the 3rd month of the treatment.

DISCUSSION: Ayurveda has advocated the need of proper preconceptional care to beget a good progeny. Pumsavana is explained for garbha grahana, garbha sthāpana (supporting and maintaining the conception). Considering the case as garbhasrāvi vandhya (infertility with a history of abortion), the treatment was given to support the implantation, improve the quality of male and female factors. The treatment protocol was designed to improve the overall health of the patient by considering the somatic, psychological and spiritual realm.

KEYWORDS
Vandhyata, Garbhasrāvi Vandhya, Virechana, Garbhadana, Preconceptional Care

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INTRODUCTION
Infertility is defined as the inability of a couple to conceive despite having carefully timed frequent unprotected sexual intercourse for one year. Infertility can be primary when the couple have never conceived and secondary when the couples have already conceived and having difficulty to conceive again. Infertility affects about 8 to 10 percent of the couples in the reproductive age group. Conception is dependent on the fertility of both the partners. For infertility, the male is directly responsible for 30 to 40 percent of the cases while female for 40 to 55 and both in about 10 percentage. In rest of the 10 percentage, unexplained infertility persists, where the couple is pathologically healthy\(^1\).

According to Ayurveda, the concept of vandhya holds near to infertility. Hareeta has described seven types of vandhya which may due to bāla avastha (immaturity of reproductive organs), garbhakośa bhanga (uterine abnormalities), dhātu kshaya (poor nutritional status), garbhasrāvi (unsuccessful pregnancy with abortion history), kākavandhya (inability to conceive after one child), anapatya (primary sterility), mritāvastha (repeated fetal loss)\(^2\). By analysing the above types, it can be concluded that vandhya in Ayurveda is not limited to absence of conception but also the failure of successful continuation of pregnancy leading to the birth of a live child. According to Ayurvedic classics, along with healthy sperm and ovum, healthy reproductive organs, good physical, nutritional and mental status, timely intercourse, normalcy of vāta are also needed for a good conception\(^3\). Acharyas have also added the treatment principles which are to be adopted in cases when the infertility is due to the pathology in the above factors. A couple devoid of pathology also is advised to follow certain regimen similar to the preconceptional care to attain deha āśaya mano śuddhi (healthy body, reproductive organs and mind) to beget a healthy progeny\(^4\).

CASE REPORT
This is a case report of a 33 year old married, non-smoking, non-alcoholic female with secondary infertility since 2 years of unprotected sexual intercourse.

CASE HISTORY
The patient attained menarche at the age of 14 and had regular cycles i.e., 28-30 day interval with 4-5 days moderate bleeding, used 2-3 pads per day. She used to have tolerable pain 6 to 8 hours before the onset of menstruation and used to continue for 5 to 6 hours thereafter. At the age of 30 years,
in February 2014, she got married to a 33 year old man. It was a non-consanguineous marriage. Since then they were living together. For the initial one year, they used barrier contraception to postpone the pregnancy. In May 2015, after 3 months of discontinuing the barrier contraception, she conceived, but after the 5th week per vaginal bleeding occurred and it got aborted. After that she never conceived. She consulted an allopathic doctor in January 2016 and did USG (TVS), hormonal assays and tube test and results were normal.

Appendices

A.1: USG report of the patient confirming conception

A.2- USG report on completion of the 24th week of gestation.
of allergy or addiction for both the partners. Personal history revealed regular bowel habits and sound sleep. Both the partners prefer sweet, spicy and fried food and preferred meat daily. No similar complaints were found among their siblings.

On general examination, they were conscious and well oriented. Blood pressure was 110/70 mm Hg, Pulse rate 70 bpm, and Height 165 cm, Weight 60 kg for the female and for the male Blood Pressure was 120/80 mm Hg, Pulse 74 bpm, Height 178 cm and Weight 80kg. Both were of vāta pitta prakriti (body constitution) with madhyama satva (mental status). Systemic examination was done and found to be normal. Abdominal examination revealed no tenderness or masses. All the relevant investigations were found normal for both the partners. For the female partner, per speculum and per vaginal examinations were done and found to be normal.

Based on the history and assessing the present condition, the case can be diagnosed as garbhasrāvi vandhya (infertility with history of abortion). Since no identifiable pathology was found, it can be included under unexplained infertility.

Acharyas have advised to follow certain procedures and diet and regimen for both the partners prior to conception. The concept of pumsavana is also explained for garbha graha, garbha sthāpana (supporting the implantation and maintaining the pregnancy). Considering these principles, a specific treatment protocol was adopted for both the partners.

The treatment protocol adopted for the female is tabulated in Table No: 1 and that of the male is detailed in Table No: 2.

| Table 1 Treatment protocol- female |
| Treatment | Medicine | Days | Dose |
| Dīpana-Pāchana | Hinguvachādi Chūrnam | Day 1- Day 3 | 3gm bd |
| Snehāpāna | Phala Sarpi | Day 4- Day 8 | 25ml,50ml,100ml,200ml, 250ml |
| Sarvānga Abhyangam Bāshpa Swedam | Dhānvantaram Tailam | Day 9- Day11 |
| Virechanam | Gandharvahasthādi Ėrandam | Day 11 | 30 ml (vegas 10) |
| Samsarjana Karma (special diet based on the purification) | | Day 11-Day 13 |
| Samana | (1)Phala Sarpi | 2tsp bd |
| (2) Śatāvari (5gm), Yashimadhu (5gm) | 100ml |
| (3) Vatānguram (2 nos.), Māsha (5 gm), Sugarcandy in Milk In empty stomach | 3 months |

Advice- brisk walking for 20 min daily, sūryanamaskāra 12 rounds in the morning, meditation and prānāyāma for 30 minutes daily
Table 2 Treatment protocol – male

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Medicine</th>
<th>Days</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dīpana – Pāchana</td>
<td>Hinguvachādi</td>
<td>Day 1-3</td>
<td>3 gm bd</td>
</tr>
<tr>
<td>Snehapāna</td>
<td>Sukumāra Ghritam 14</td>
<td>Day 4-6</td>
<td>25ml bd</td>
</tr>
<tr>
<td>Sarvānga Abhyanga Bāshpa Swedam</td>
<td>Dhanvantaram Tailam</td>
<td>Day 7-9</td>
<td></td>
</tr>
<tr>
<td>Virechana</td>
<td>Gandharvahasthādi Érandam</td>
<td>Day 9</td>
<td>30ml (vegas - 8)</td>
</tr>
<tr>
<td>Samsarjana karma (special diet based on the purification)</td>
<td>Day 10-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samana</td>
<td>Māsha aswagandhādi Chūrnam 20</td>
<td>3 months</td>
<td>1 tsp bd with milk</td>
</tr>
</tbody>
</table>

OUTCOME
The patient conceived during the third month of treatment. (Her LMP was 7/10/2017)
She successfully delivered a female baby (FTND, baby weight 2.9 kg) at her 34 years of age on 9/7/2018.

DISCUSSION
The clinical symptoms and history of the present case report resemble to garbhasrāvi vandhya. Charaka mentions that, garbha (fetus) is formed by the union of śuddha śukra and ārtava in apradushta garbhāśaya (healthy uterus) during ritu kala (fertile period)⁶. It grows owing to the nourishment from the āhara rasa (essence of food) of the mother⁷. Saumanasya (psychological well-being) ⁸ and normalcy of vāta (a body humor) ³ are also essential for conception and maintenance of pregnancy. Hence Ayurvedic management of infertility follows a holistic approach considering the individual as a whole and considers both the body and psyche.

The female in this present case is of 33 years old and many studies prove that women suffer from reduction in fecundity as the age advances. At any age over 30 years, women who have not attained their first pregnancy have a lower chance of achieving pregnancy⁹. The decrease in fecundity is mainly due to the decline in the quality of the oocyte released along with that of the endometrium. This is also accompanied by an increased risk of abortions. Taking this into consideration, śodhana in the form of virechana was given to promote deha and āśaya śuddhi for both the partners. It is indicated in the pathologies affecting the male and female reproductive factors and also in the context of garbhādhāna⁴ which may be understood as the present day preconceptional care. Preconceptional care is a broad concept that promotes social, behavioural, environmental, biomedical health to a couple indenting for conception through counselling, education and necessary medical interventions. Similarly in our
samhitas, Acharyas have mentioned diets and regimen to be followed during menstruation, during ovulation, suitable age for marriage and conception, how to time the sexual act to beget the progeny in the Ayurvedic classics.

In both the partners, dīpana pāchana\textsuperscript{10} was given initially for three days with Hinguvachādi Chūrnam\textsuperscript{11} to improve the agni. It was followed by snehapāna (intake of ghee). For the female partner, intake of ghee in increasing dose with phalasarpi\textsuperscript{12} as indicated in preconceptional care\textsuperscript{13} was given whereas the male was given sukumāra ghrita\textsuperscript{14} in a dose of 25 ml for three days in rice gruel with a pinch of rock salt adopting the sadyo snehana concept\textsuperscript{15}. It was followed by Sarvāṅga Abhyanga Bāshpa Sweda (full body massage with medicated oil – Dhānwantaram Tailam\textsuperscript{16} and sudation therapy) and then virechana with gandharvahāsthadi erandam\textsuperscript{17}. Virechana helps to attain śroto viśuddhi (purify the channels), normalises agni and supports vatānulomanas (normal movement of vāta)\textsuperscript{18}. In the context of preconceptional care, acharyas have advised the male to take ksheera processed with madhura drugs as it increases the quantity and quality of śukra.\textsuperscript{19} Based on that understanding, māśhāswagandhādi chūrna\textsuperscript{20} was selected. It contains māśa (Vigna mungo), aswagandha (Withania somnifera), swadamshtra (Tribulus terrestris), mudgabeeja (Vigna radiata), yashti madhu (Glycyrrhiza glabra) and pakwa rambha phala (ripe fruit of Musa paradisiaca) which are cooked in milk, dried and powdered and given with milk as anupāna (adjuvant). This combination is predominantly madhura rasa (sweet taste), snigdha (unctuous), śukra (supports male factor), balya (promotes energy), rasāyana (rejuvanate), vrishya (aphrodisiac) and promotes dhātu pushhti.

In the female, the śamana chikitsa was given with the drugs improving the agni, supporting the implantation, proper functioning of ārtava and dhātus and improving the quality of the ovum. Phalasarpi is a medicated ghee which is dhātu vardhaka (promotes body tissues), garbhadām (promotes conception), ayushyam (supports health), pushti medha vardhaka (improves the body tissues and memory) and is indicated in yōni roga (female reproductive disorders)\textsuperscript{12}. Study reports the in vivo effect of phalasarpi in animal model female albino rat significantly increased the serum estradiol level and body weight which shows its probable role of action over the hypothalamo pituitary ovarian axis\textsuperscript{21}. The drugs in this yoga contain phytoestrogens and acts as a uterine tonic. It also supports
the proliferation of the endometrium along with supporting the folliculogenesis. The burden of infertility creates psychological stress which leads to generation of reactive oxygen species and thereby oxidative stress which may have a negative impact over the oocyte and endometrium. Śatāvari, yashti madhuksheerapākam (decoction with milk adding Asparagus racemosus and Glycyrrhiza glabra) is rich in phyto estrogens and antioxidants which reduces the stress mediated reproductive problems thereby supporting ovulation and implantation\textsuperscript{22, 23}. Vatānguram (young shoots of Ficus benghalensis), Māsha (Vigna mungo) in the form of bolus added with Sugar Candy in Milk was given rooting in the principles of pumsavana which is garbha grahanaya, garbha sthāpanārtham. Chemical constituents in the combination like sterols, flavanoids, tannins, sapponins support the aromatisation of testosterone to estrogen which is having a positive effect on ovulation and in increasing the endometrial thickness\textsuperscript{24}. Food and other regimens to be followed for both the partners were also given due importance. They were advised to avoid meat and resort to healthy diet consisting of rice, milk, pulses, fruits, vegetables and small fishes which are rich in omega-3 fatty acid in order to get adequate nutrition. Also advised to time the intercourse according the fertile window. The mental status of the couple during conception plays a very important role. Hence exercises, sūryanamaskāra, meditation and prānāyāma were advised giving due consideration to the health of the psyche and body. These could surely remove the mental stress and had a positive effect over the hypothalamo pituitary ovarian axis to support the treatment.

**CONCLUSION**

The treatment protocol was designed based on the concept of garbhadhāna pūrva karma which may be similar to the present day concept of preconceptional care. Thus the holistic approach considering the individual as a whole, helped the couple to conceive naturally.
REFERENCE


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