A CASE STUDY ON SAPRAJA W.S.R TO SECONDARY INFERTILITY

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ABSTRACT
Most women desire to have a child of their own. Understanding what defines normal fertility, is crucial in helping a woman, or couple, to know when it is time to seek help. Polycystic ovarian disease is very common endocrine condition in reproductive age group. Polycystic ovarian disease has negative impacts on fertility because women with this condition do not ovulate, or release an egg, each month due to an over production of oestrogen by the ovaries and periods become irregular that leads to infertility. In Ayurveda, the pathogenesis of polycystic ovarian disease is similar to condition of Nashtarthava. By considering the above facts we have taken this case and proved that Ayurveda plays an important role. Hence these 3 herbal formulations like, Rajahpravarthini vati, Nashta pushpanthaka rasa, Kumaryasava have been given for 3 months as shamanoushadhi. We treated polycystic ovarian disease, which is one of the causes for infertility. In the follow up period, USG revealed that there is no sign of polycystic ovarian disease, consequently patient conceived and delivered a male baby. Hence the case is discussed to prove the efficacy of Ayurvedic management in secondary infertility.

Keywords: Polycystic ovarian disease, Secondary Infertility, Nashtarthava

INTRODUCTION
Infertility is a global health issue affecting approximately 8-10% of couple’s worldwide. Nevertheless, research has shown consistently that secondary infertility, which refers to women who had one pregnancy and live birth previously, is more common than the primary infertility. According to systematic analysis of national health surveys, in 2010, approximately 10.5% of women experienced secondary infertility, and 2% experienced primary infertility¹. Menstrual abnormalities are common in women now a day due to changes in lifestyle, dietary habits, medications and lack of exercise. PCOD is a condition in which the levels of the sex hormones are out of balance which leads to the growth of ovarian cyst². Polycystic Ovarian Disease is common among members of the younger generation, with almost 10 million people affected globally. Its world-wide prevalence varies from 2.2-26 per cent and according to latest statistics in India, one in every four young women is said to have polycystic ovarian disease³. It is most common cause of infertility in women. Women are the ultimate source of human progeny. As human life is constantly influenced by the rhythmic phenomenon, the female menstrual cycle involves
dramatic monthly hormonal change affecting a women’s emotional and physical state. Women with polycystic ovarian disease struggle to conceive. In Ayurveda, the pathogenesis of PCOD is similar to the condition of Nashtarhava i.e. amenorrhea – which is absence or abnormal cessation of menstruation. Viti-ration of vata and kapha leads to aavarana of aarthava which intern causes nastarthava i.e. disturbed growth of follicles and chronic anovulation. The drugs like Nashtapushpanthakarasa, Rajharpavarthini vati and Kumaryasava have been selected for the study to treat secondary infertility due to Polycystic Ovarian Disease.

**CASE REPORT:**
A 31 year old married woman visited the OPD of Prasoothi Tantra and Stree Roga, SDM College and Hospital, Udupi, on 20th February 2018 with the complaint of irregular cycles. She had the history of irregular cycles since her menarche, but with the help of medical intervention she was able to conceive and had one female child 7 years old. She has been actively trying to conceive since 4 years with no results. She also had the history of irregular periods. USG of the patient was confirmative of polycystic ovarian disease. She reported to Prasoothi Tantra and Stree Roga, OPD for the ayurvedic management.

**PAST HISTORY**– No H/O DM /HTN /Thyroid dysfunction or any other medical or surgical history.

**FAMILY HISTORY**– No family history of PCOS

**MENSTRUAL HISTORY**
Menarche: At the age of 13 years
Previous LMP- 8 October 2017
LMP- 26 December 2017
Cycle Length - 60-75 days with 5-6 days of bleeding.

**TABLE -1: MENSTRUAL HISTORY**

<table>
<thead>
<tr>
<th>1st Day</th>
<th>2nd Day</th>
<th>3rd Day</th>
<th>4th Day</th>
<th>5th Day</th>
<th>6th Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Pads fully Soaked</td>
<td>3 Pads fully Soaked</td>
<td>2 Pads fully soaked</td>
<td>2 Pads fully Soaked</td>
<td>1 Pad half soaked</td>
<td>Spotting</td>
</tr>
</tbody>
</table>

1) Clots- Present only on 1st day
2) Colour - Reddish
No any other complaints.

**OBSTETRICAL HISTORY:**
Married life- 7 and ½ years
No consanguineous marriage
P1L1A1D0
L1-female baby 6 and 1/2 years LSCS done
A1-At 1 and ½ month (MTP) at 6 years back

**TABLE -2: ASHTA STHANA PAREEKSHA**

<table>
<thead>
<tr>
<th>Nadi</th>
<th>Mutra</th>
<th>Mala</th>
<th>Jihva</th>
<th>Shabda</th>
<th>Sparsha</th>
<th>Druk</th>
<th>Aakruthi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitta</td>
<td>Prakrutha</td>
<td>Prakrutha</td>
<td>Anushna</td>
<td>Prakrutha</td>
<td>Anushna sheeta</td>
<td>Avishesha</td>
<td>Madhyama</td>
</tr>
<tr>
<td>Vata</td>
<td></td>
<td></td>
<td>Sheeta</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE -3: DASHAVIDHA PAREEKSHA**

<table>
<thead>
<tr>
<th>Prakruthi</th>
<th>Vikruthi</th>
<th>Sara</th>
<th>Samhanana</th>
<th>Pramanthi</th>
<th>Satmya</th>
<th>Satva</th>
<th>Aahara shakthi</th>
<th>Vyayama shakthi</th>
<th>Vaya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitta-Vata</td>
<td>Vata-Kapha</td>
<td>Prakruthi</td>
<td>Madhyama</td>
<td>Dhairgsa-164cm Dehabhara-71 kg</td>
<td>Sarvarasa satmya</td>
<td>Madhayama</td>
<td>Madhyama</td>
<td>Madhyama</td>
<td>Madhyama</td>
</tr>
</tbody>
</table>
TABLE 4: SYSTEMIC HISTORY

<table>
<thead>
<tr>
<th>CVS</th>
<th>CNS</th>
<th>RS</th>
<th>P/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 S2</td>
<td>Well oriented, conscious ness</td>
<td>Normal vesicular breathing</td>
<td>Soft, non-tender</td>
</tr>
</tbody>
</table>

TABLE 5: PERSONAL HISTORY

Diet – non-vegetarian

<table>
<thead>
<tr>
<th>Appetite</th>
<th>Bowel</th>
<th>Micturition</th>
<th>Sleep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>1/day</td>
<td>4-5/day</td>
<td>Sound</td>
</tr>
</tbody>
</table>

TABLE 6: GENERAL EXAMINATION

<table>
<thead>
<tr>
<th>Built</th>
<th>Nourishment</th>
<th>Temperature</th>
<th>RR</th>
<th>PR</th>
<th>BP</th>
<th>Height</th>
<th>Weight</th>
<th>Tongue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate</td>
<td>Moderate</td>
<td>98°F</td>
<td>18</td>
<td>78</td>
<td>120/80</td>
<td>164</td>
<td>71</td>
<td>uncoated</td>
</tr>
</tbody>
</table>

COITAL HISTORY

Occasionally dyspareunia present, No Bleeding, Satisfactory

TABLE 7: Ingredients of rajhapravarthini vati, nashtapushpanthaka rasa and kumaryasava

1) **Rajhapravarthini vati** - 1 tablet three times a day with 50 ml *tila kashaya*
   - 1 tablet three times a day with

2) **Nashtapushpanthakarasa** - 1 tablet 3 times a day with lukewarm water
   - Water

3) **Kumaryasava** - 20 ml 2 times in a day

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>52. Loha Bhasma</td>
<td>53. Gokshura</td>
<td>54. Gokshura</td>
<td>55. Adusha</td>
<td>All 3 medicines were Administered for 3 months.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
INVESTIGATION:
**USG of Pelvis on 19/9/17 - Before treatment**
Uterus –Anteverted, Measured about 5.3 x 4.5cms, endometrial thickness- 14.0mm
Rt ovary-2.8x1.7cms, Lt ovary-4.2x2.1cms (Shows multiple small follicles) Impression – Bilateral poly-cystic ovaries. Normal appearing uterus, endometrial cavity, both adnexa, Pouch of Douglas

**Lab report on 19/9/17**
Random Blood Glucose- 93 mg/dl
HbA1C -5.0%
Thyroid Stimulating Hormone- 1.94 micro IU /ml

**Lab report on 23/09/17**
Anti Mullarian hormone- 4.18 ng/ml
FSH – 7.6 micro IU/ml
LH- 5.6 micro IU/ml
Prolactin- 19.7 ng/dl

**Ovulation study**
LMP- 12/4/18
Impression- Ovulation has occurred between 31st and 32nd day of cycle. The follicles have matured well and ovulation has taken place normally.

**USG of pelvis on 14/5/18:After treatment**
Impression: Normal abdomino pelvic sonographic findings.

**TABLE-8: OBSERVATION AND RESULT**
Changes and improvement before and after treatment

<table>
<thead>
<tr>
<th>Changes</th>
<th>Before Treatment</th>
<th>Completion of 1st menstrual cycle after treatment</th>
<th>Completion of 2nd menstrual cycle after treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval between 2 cycles.</td>
<td>60-75 days</td>
<td>56 Days</td>
<td>52 Days</td>
<td>On14/5/18- Normal Abdomino-Pelvic Sonographic findings</td>
</tr>
<tr>
<td>Cycles</td>
<td>LMP-26/12/17</td>
<td>LMP- 20/2/18</td>
<td>LMP-12/4/18</td>
<td>UPT-Positive(5/6/18)</td>
</tr>
<tr>
<td>Duration of bleeding</td>
<td>6 days</td>
<td>3 Days</td>
<td>4-5 Days</td>
<td>LSCS with B/L Tubectomy on 7/1/19 at 9:44 AM</td>
</tr>
<tr>
<td>USG finding</td>
<td>On 19/9/17 Bilateralpoly cystic ovaries</td>
<td></td>
<td></td>
<td>Indication- Pre. LSCS Male healthy baby Weight 3 kg.</td>
</tr>
</tbody>
</table>

**DISCUSSION**

Nastarthava occurs due to vitiation of vata –kapha (increased estrogenic state), leads to aavaran of arthava (Inhibition of FSH). Yathochitha kala arthava adarshanam occurs due to srothorodha, pittavardhaka (aagneya) dravyas, which removes srothorodha and brings up the normal menstrual flow. Nashtapushpanthaka Rasa, Rajahpravarthini vati, Kumaryasava are given in the management of nashtarthava in case of PCOD.

1) The drug *Nashtapushpanthaka Rasa* is a rasou-shadhi preparation given in condition of Nastapushpa, which may be considered as amenorrhea and anovulation. The ingredients like danti, rasna, bruhati, kakamachi, kapikacchu, daruha, kustha, vetasam, talispatra, vanga bhasma, loha bhasma, abhraka bhasma, tamra bhasma which are ushna veerya, kapha-vata shamaka which help in samprapthi vighatana of arthava kshaya. Dravyas like tamra, rajatha, loha, vanga, abhraka, kapikacchu, vamshalochana, Madhuka, Kushta are having
arthava janana karma. Rajatha and Tamra are having lekhana properties & act on clearing avarana, reducing kleda, picchila guna of kapha. Due to Ushna veerya and agneyatva of all the drugs clear the sroto avarodha and increases blood circulation in the yoniand garbhashaya, because of this there will be formation of healthy endometrium. Resulting in regularising the menstrual cycle.

2) **In Kumaryasava**

Kumari being tiktha, madhura rasa, sheetha veerya, Guru, pichila, snigdha guna having action of arthavajanana & deepana. Hence kumaryasava is mainly indicated in nashtapushpa and the combination mainly aims in deepana and pachana. Kumari exhibit hepatoprotective activity which helps in proper metabolism of hormones in the liver. Teekshna guna of the drugs favour the srothoshodhana and thereby releasing the avarana. The Arthavajanana and pravarthana karma help in regularising the cycle. Deepana and Pachana action regulate jataragni, dhatvagni and bhutagni which correct metabolism at cellular level, resulting in proper formation of dhathu’s and Upadhatu’s (Arthava).

3) The drugs in **Rajahpravarthini vati** possess properties like katu, tiktha rasa, teekshna guna, ushna veerya, katu vipaka and thereby increasing agneya guna in the body. It also does vata – kapha shama and arthava janana. So eliminates the obstruction caused by aggravated kapha –vatha dosha and increases the flow of the arthava. Hingu, Kumari, Tankana and Kaseesa are the main ingredients of rajahpravarthini vati. Hingu has shoohalara and vatamuloman and helps in normalising the functions of apanavatha and also effective in Arthava vikara’s.

**CONCLUSION**

All the dravyas used here as a medicine is having the primary action on agni. When the agni is corrected, proper rasadhathu formation and uttarottara dhathu utpatti takes place. Hence, aartha being the upadhathu of rasa is also regulated. Tha dravya’s used here are ushna veerya help in clearing the aavarana, srothoshodhana, vatha-kapha shama. When the vatha is normalises, it intern balances the other 2 dosha’s. So, when the agni and vata are in a state of equilibrium acts on the arthava in performing it’s prakrutha karma.

Thus, we can conclude from this study that, the sapraja w.s.r to secondary infertility due to polycystic ovarian disease was treated with shamanachikitsa, only for 3 months which helped in relieving the symptoms of polycystic ovarian disease and concurrent successful conception and delivered with male baby.

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