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Effect of Ayurveda Treatment Protocol in the Management of Multifactorial Female Infertility- A Case Report

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ABSTRACT

INTRODUCTION: The incidence of infertility in female factor is increasing now a day due to increase in age of marriage as females are more oriented towards their carrier. Successful healthy conception requires proper structure and function of entire reproductive system. Therefore, there is the great scope of Ayurveda research to find out appropriate and effective solution for this problem. Considering all these points the present study was planned according to Ayurvedic principles. Hence this cost effective, safe study was carried out to evaluate the efficacy of *Shodhana Karma* followed by *Shamana Aushadha* in the management of *Vandhyatva*. **AIMS & OBJECTIVES:** To evaluate the efficacy of *Virechana*, *Yapana Basti*, *Uttarabasti* & *Shamana Aushadha* in the management of Infertility. **MATERIALS & METHODS:** A 29 years old Patient having complaint of failure to conceive since 5 years with history of two abortions was selected from the OPD of IPGT & RA, GAU, Jamnagar. Patient was treated with *Virechana*, *Yapana Basti*, *Uttarabasti* & *Shamana Aushadha*. The duration of therapy was 5 months. **RESULTS & DISCUSSION:** There was improvement in proper endometrium thickness, ovulation occurred followed by conception and patient delivered a full term normal healthy male baby. *Samshodhana* and *Shamana Aushadha* helped to pacify vitiated *Vata* and *Pita Dosha* of the body thus helping to restore the fertility. **CONCLUSION:** The selected treatment protocol i.e. *Samshodhana* and *Shamana Aushadha* is very effective in the management of multifactorial Infertility.

KEYWORDS

Uttarabasti, *Vandhyatva*, *Virechana*, *YapanaBasti*



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INTRODUCTION

Continuing progeny depends upon various aspects including male and female factors under broader classification. Among the women prevalence of infertility is 40%-55%¹. *Acharya Sushruta* has mentioned that four factors responsible for the proper conception i.e. *Rutu* (Period of conception), *Kshetra* (*Garbhashaya*), *Ambu* (*Rasa*-the essence of food) and *Beeja* (*Artava*-menstruation & ovum, *Shukra*) should be in their normal healthy condition². The prevalence of hyperthyroidism is 1.8% and 1.2% (subclinical)³ and it is more common in women than men⁴. Tubal factor accounts for 25% to 35% of infertility⁵. The incidence of tubal infertility has been reported to be 8%, 19.5% and 40% after one, two and three episodes of PID respectively⁶. There is a considerable variation in the prevalence of the Rubella Specific IgG antibodies among the women of the reproductive age, Suggestions from various studies showed prevalence of Rubella immunity is 71.3% and 1/3rd of the women are susceptible to the Rubella infection⁷. Modern medical science seems to be unsatisfactory for the definitive and proven treatment protocol for primary infertility including various Medications and IVF⁸. IVF is the most effective treatment in modern medicine but the probability of successful conception

with IVF is poor especially among the low AMH patient. According to *Kashyapa*, Infertility is included among eighty diseases of *Vata*⁹. Many *Upakrama* and *Aushadha* like *Panchakarma*, *Rasayana*, *Vajikarana* and *Prajasthapana Aushadha* are indicated in *Vandhyatva*. *Samshodhana* has usually initiated the sequence among which *Virechana* is almost recommended and most comfortable for women. Here, a case of multifactorial infertility was registered and management for the same was given in the form of *Virechana*, *Yapana Basti*, *Uttarabasti* and *Shamana Aushadha*.

AIMS AND OBJECTIVES

To evaluate the efficacy of *Virechana*, *Yapana Basti*, *Uttarabasti* & *Shamana Aushadha* in the management of Infertility.

MATERIALS AND METHODS

It is a single-arm, open labelled case report of a subject of multifactorial infertility who was treated with *Virechana* initially, *Mustadi Yapana Basti* and *Uttarabasti* followed by *Shamana Aushadha*.

PRESENTING CONSERNS AND HISTORY

A female patient aged 29 years, married 7 years ago came to the OPD of Prasutitantra and Streeroga, IPGT & RA, GAU,



Jamnagar on 17th March 2015 with complaints of failure to conceive since 5 years with history of two abortions. Patient also had associated complaint of scanty menses with moderate pain since 5 years. One year after the marriage patient conceived first time and the pregnancy ended in spontaneous abortion after 2 months of gestational amenorrhoea on 5th November 2009. Patient conceived for the 2nd time after 1 year of previous abortion which too ended in missed abortion within two months on 10th August 2010. D & E was done at that time. Following D & E, she suffered with some complications like continuous moderate pelvic pain and scanty menses. Later Patient was diagnosed with Left cornual block on 23rd October 2010; Hyperthyroidism (S.TSH 0.01mIU/L) and positive TORCH (Rubella IgG-111.8 IU/ml) infection on 5th May, 2012. Patient has been known case of hyperthyroidism since 2012 and taking tablet carbimazole 5 mg orally*OD all these years. Smaller than normal size Uterus and poor endometrium was reported in USG (7th January 2015) and investigation showed very low AMH (0.38 ng/ml) on 13th January 2015. Patient had taken various allopathic treatments from different hospitals since 5 years and lastly she was advised for IVF as there were no chances of natural conception due to poor ovarian reserve. Patient was unwilling for

the IVF hence she came to IPGT & RA Hospital. Her personal history revealed normal urine function, regular bowel habit, and sound sleep. Her appetite was apparently normal and the tongue was uncoated. She had normal menstrual cycle before D & E. Her menstrual cycle was regular after the procedure i.e. 26-32 days but duration of flow was less i.e. 2-3 days, Amount of menstrual blood was scanty (1 Pad/day) with moderate pain. Patient had coital history alternatively in mid menstrual cycle. Her husband is 33 years old and his semen analysis report was completely normal. Her height was 160 cm, weight 60 kg and BMI was 23.4 kg/m². Vital signs i.e. BP 130/80 mmHg, Pulse-80/m, RR 20/m, body Temperature of 98.6° F were found to be within normal limit. Patient has *Vata Pitta Prakriti* with *Madhyama Satva, Samhanana* and *Madhyama Koshtha*. There was no any abnormal finding seen in per speculum and per vaginal examination.

INVESTIGATION

Left cornual block was found in HSG [Figure 1]. IgG positive Rubella was found in TORCH profile [Figure 2]. Hyperthyroidism was found in thyroid profile [Figure 3]. In USG report uterus found to be smaller than normal size [Figure 4]. Low level of AMH was there [Figure 5]. Haematological, Urine, Biochemical and Microbiological



investigation were done and were within normal range [Figure 6]. Ovulation study was done and anovulatory cycle was noted.

DIAGNOSIS

Based on the clinical features and investigation findings the diagnosis was

confirmed. In the view of symptoms and clinical findings, the present case was diagnosed as *Dhatukshayajanya Vandhyatva*.

Table 1 Total duration of therapy

Month	Treatment
1 st month –April 2015	<i>Virechana</i>
2 nd month-May 2015	<i>MustadiYapanaBasti</i> for 16 days + Oral therapy 10 days
3 rd month-June 2015	Intra Uterine <i>Uttarabasti</i> for 6 days + Oral therapy for 20 days
4 th month-July 2015	Intra Uterine <i>Uttarabasti</i> for 6 days + Oral therapy for 20 days
5 th month- August 2015	Intra Uterine <i>Uttarabasti</i> for 6 days + Oral therapy for 20 days

Table 2 *Virechana* procedure

Procedure	Drug & Dose	Duration
<i>Deepana & Pachana</i>	<i>Trikatu Choorna</i> - 2gm/3times a day with warm water.	3 Days
<i>Snehapana</i>	<i>Go-Ghrita</i> (5 days, <i>Vardhamana Krama</i> , 30 ml, 60 ml, 90ml, 120ml, 150ml)	5 days
<i>Abhyanga & Swedana</i>	<i>BalaTaila & Bashpa Sweda</i>	3 Days
<i>Virechana Karma</i>	<i>Trivrita Avaleha</i> ¹⁰ 70 g With <i>Krishna Draksha Jala</i> 100ml	1 Day
<i>Sansarjana Karma</i>	<i>Madhyama Shuddhi</i> (19 <i>Vega</i> , <i>Kaphanta Shuddhi</i>)	5 days

TREATMENT PROTOCOL

The informed written consent was taken before the treatment.

Table 1 Total duration of therapy

METHODOLOGY

Table 2 *Virechana* procedure

Mustadi Yapana Basti procedure

Local *Abhyanga* with *Bala Taila* and *Nadi Sweda* followed by *Mustadi Yapana Basti* was given for 16 days.

Table 3 *Mustadi Yapana Basti* drug¹¹

Uttarabasti

Uttarabasti was started after cessation of menstrual flow once daily for 6 days for 3 consecutive cycles. Local *Abhyanga* with

BalaTaila and *Nadi Sweda* followed by *Yoniprakshalana* with *Panchvalakala Kwatha* was done as *Poorvakarma* of *Uttarabasti*.

Table 4 *Uttarabasti Pradhanakarma*

Uttarabasti Paschat Karma

Yoni Pichu and Head low position was advised for 2 hours.

Oral medicine

After *Yapana Basti* and *Uttarabasti*, oral medicines were prescribed for 70 days as mentioned below.

Table 5 Oral medicine drug

RESULTS



Effect of therapies showed that quantity of menstrual flow and duration of menstruation became normal and severity

of pain was also reduced (Mild). These subjective criteria were measured by scoring pattern.

Table 3 *Mustadi Yapana Basti* drug¹¹

Drug		Dose	
<i>Madhu</i>		60 ml	
<i>Saindhava</i>		12 g	
<i>Sneha- DhanvantaraTaila</i> ^[12]		30 ml	
<i>KsheerabalaTaila</i> ^[13,14]		30 ml	
<i>Kalka</i>			
Drug	Botanical name	Part used	Dose
<i>Shatapushpa</i>	<i>Anethum sowa</i> Kurz.	Dried ripe fruits	6 g
<i>Yastimadhu</i>	<i>Glycirrhiza glabra</i> Linn.	Dried unpeeled stolon and root	6 g
<i>KutajaPhala (Indrayava)</i>	<i>Holarrhena antidysenterica</i> Wall.	Dried seeds	6 g
<i>Rasanjana</i>	Extractum berberis	Decoction of <i>Daruharidra</i>	3 g
<i>Priyangu</i>	<i>Callicarpam acrophyllavahl.</i>	Dried fruit	6 g
<i>Kwatha (Ksheera Sadhita) (Kwatha was prepared as mentioned in Sharangadhara Samhita)</i>			
<i>Musta</i>	<i>Cyperus rotundus</i> Linn.	Dried rhizome	5 g
<i>Usheera</i>	<i>Vetiveria zizanoides</i> Linn	Dried fragrant fibrous roots	5 g
<i>Bala</i>	<i>Sida cordifolia</i> Linn.	Dried roots	5 g
<i>Aragvadha</i>	<i>Cassia fistula</i> Linn.	Fruit pulp (devoid of seeds, septa, & pieces of pericarp	5 g
<i>Rasna</i>	<i>Pluchia lanceolate</i> oliver&Hiern.	Dried leaf	5 g
<i>Manjishtha</i>	<i>Rubia cordifolia</i> Linn.	Dried stem	5 g
<i>Katurohini</i>	<i>Picrorhiza kurroa</i> Royle.	Dried rhizome	5 g
<i>Trayamana</i>	<i>Gentiana kurroo</i> Royle.	Dried rhizome	5 g
<i>Punarnava</i>	<i>Boerrhavia diffusa</i> Linn.	Dried root	5 g
<i>Bibhitaka</i>	<i>Terminalia belerica</i> Roxb.	Pericarp of dried ripe fruits	5 g
<i>Guduchi</i>	<i>Tinospora cordifolia</i> Willd.	Dried mature pieces of stem	5 g
<i>Shalaparni</i>	<i>Desmodium gangeticum</i> DC.	Dried root	5 g
<i>Prishniparni</i>	<i>Uraria picta</i> Desv.	Dried whole plant	5 g
<i>Bruhati</i>	<i>Solanum indicum</i> Linn.	Dried whole plant	5 g
<i>Kantakari</i>	<i>Solanum surratense</i> Burm.	Mature dried whole plant	5 g
<i>Gokshura</i>	<i>Tribulus terrestris</i> Linn.	Root, Dried ripe entire fruit	5 g
<i>Madanaphala</i>	<i>Randia dumetorum</i> Lam.	Dried fruit	20 g
<i>Ksheera</i>			400 ml
Total amount of <i>Basti</i>			559 ml

Table 4 *Uttarabasti Pradhanakarma*

Procedure	Drug & Dose	Duration
<i>Uttarabasti</i>	<i>Apamarga Kshara Taila</i> ¹⁵ 5 ml	6 days



Table 5 Oral medicine drug

No	Drug Name	Dose	Time
1	<i>Phalaghrita</i> ¹⁶	20 g*BDs	<i>Annakale</i>
2	<i>Baladi Choorna</i> ¹⁷	3 g*BDs with Milk	Before meal
3	<i>Samshamani Vati</i> ¹⁸	2 <i>Vati</i> (total 500 mg) *TDS with Warm water	After meal

Table 6 Effect of therapies on subjective criteria

Parameters of Menstrual cycle	Before treatment	After treatment
Duration	2-3 days	3-5 days
Interval	26-32	28-32
Painful/Painless	Painful	Painless
Amount of bleeding	Scanty	Moderate

Table 6 Effect of therapies on subjective criteria

Table 7 Effect of therapies ovulation study

After this treatment protocol, patient conceived and delivered a full term normal healthy male baby on 18/05/2016 [Figure 6].

Table 7 Effect of therapies ovulation study
4th month (July 2015)

Day	Right Ovary	Left ovary
11 th	16*16 mm	No follicle
13 th	18*18 mm	No follicle
15 th	Ruptured	No follicle
5th month (August 2015)		
11 th	No follicle	16*16
13 th	No follicle	18*18
15 th	No follicle	20*22
16 th	No follicle	Ruptured

DISCUSSION

To satisfy the needs of present situation, there should be better interpretation regarding the important factors of healthy progeny. In this case of infertility, patient conceived twice naturally but abortion occurred spontaneously. Further she suffered with tubal block, hyperthyroidism and low Anti mullerian hormone (AMH).

Major concern was TORCH infection which is responsible for repeated abortion. The patient has *Tridosha Vikriti* mainly *Vata-Pita* predominant progressing towards a *Dhatu Kshaya*, thereby affecting *Artava Upadhatu* which generates *Artavakshaya Lakshana*¹⁹. The whole treatment was planned according to clinical features of patient with the diagnosis supported by proper investigations. The treatment protocol aimed for a *Shamana* of *Tridosha* especially *Vata-Pita* and correction of *Agni* thereby creating equilibrium of *Dosha*.

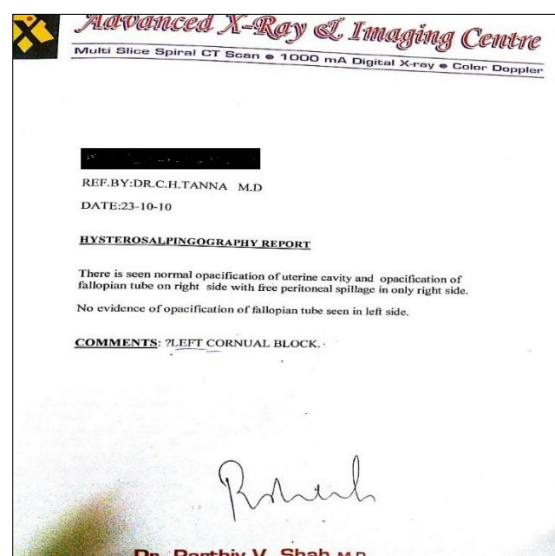




Fig 1 Hysterosalpingography

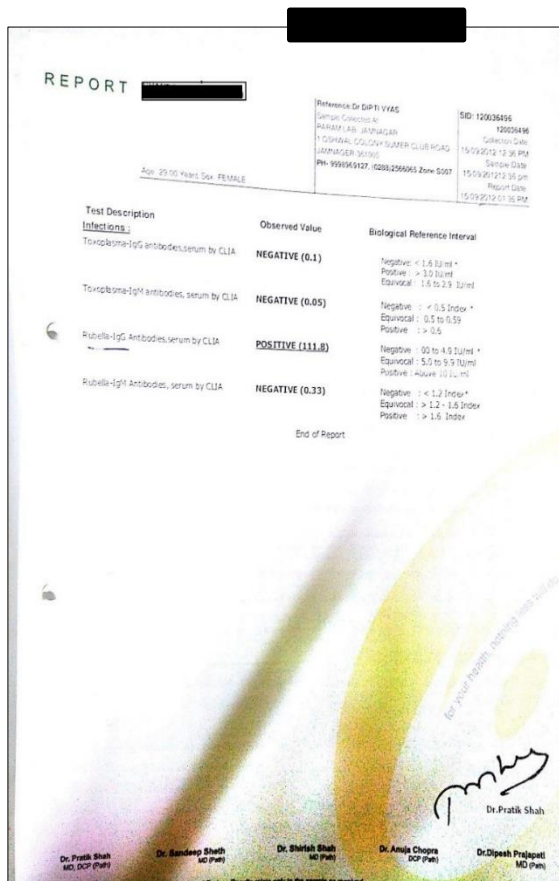


Fig 2 TORCH profile

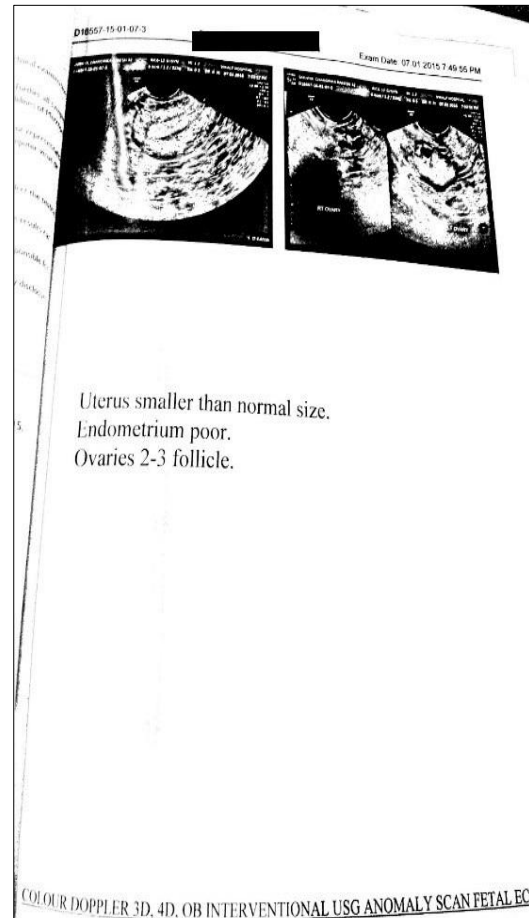


Fig 4 Pelvic Ultrasonography

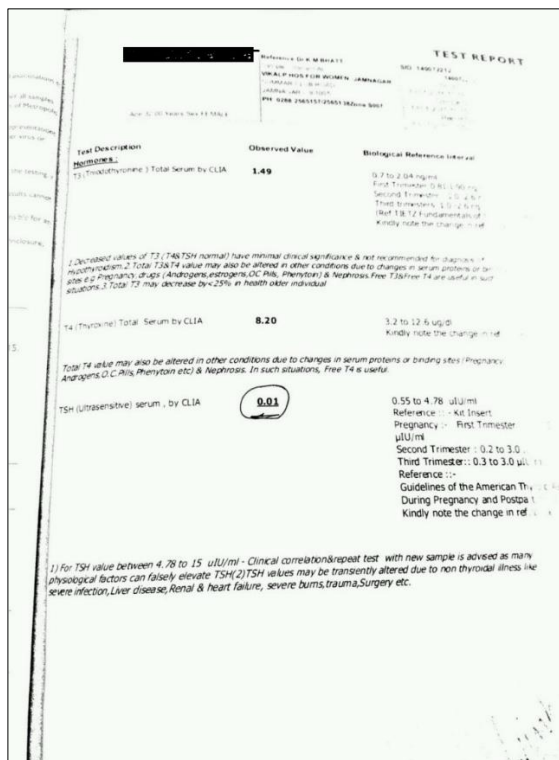


Fig 3 Thyroid profile

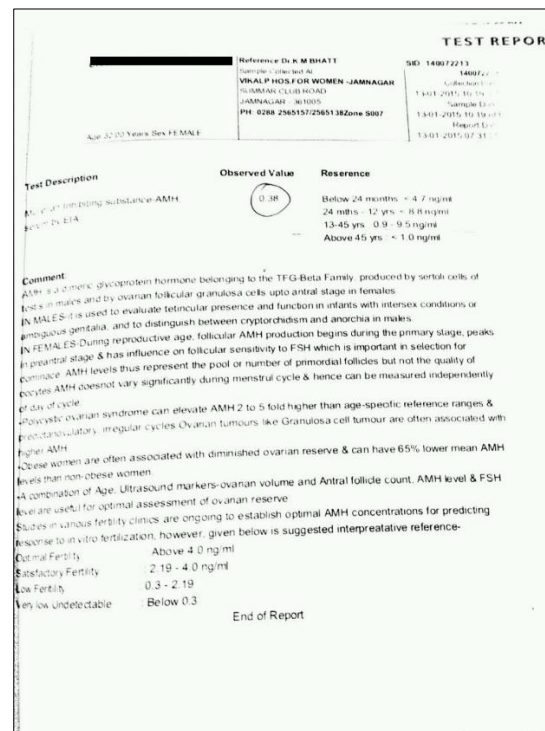


Fig 5 Anti mullerian hormone



INVESTIGATION	
HB:	9.0
BGRL:	B+ve
HIV:	-ve
VDRL:	-ve
HBS Ag:	-ve
B Sugar:	104.0
Blood U:	23.33
Serum C:	0.78
TSH:	0.01
FSH:	5.17
LH:	6.82
PL:	15.20
T3:	1.49
T4:	8.20
AMH:	<u>0.38</u>

Fig 6 General + Specific investigation

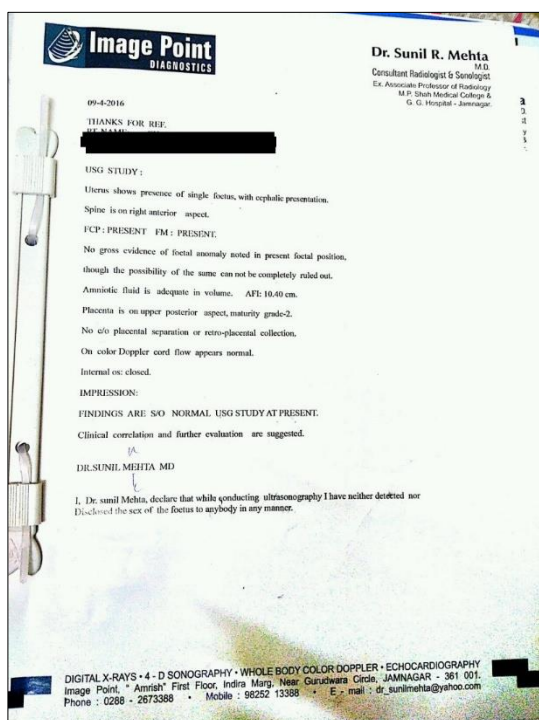


Fig 7 Results-Fetal well being

Effect on Hyperthyroidism

Thyroid hormone plays an important role in follicular development^{20,21} and also for implantation as well as embryo and placenta development during early

pregnancy²² Hyperthyroidism is considered as an *Atyagni* in the state of *Kaphakshaya*, *Pita* and *Vata Vriddhi*. *Virechana* is the best treatment for the correction of *Pitta Dushti*²³. *Virechana* helped to eliminate the vitiated *Dosha* i.e. *Dushita Pittaharanam*, *Vatanulomana*, and *Koshtha Vishuddhi*²⁴ from all over body and reduced inflammation and normalized the endocrine function.

Effect on Tubal blockage

According to Ayurveda, tubal blockage can be correlated with *Sanga Pradhana Vyadhi*. So *Virechana* helped to remove *Srotorodha* and cleaning the micro channel. *Uttarabasti* is a unique local treatment in Ayurveda as it directly affects uterine and tubal structures. Local *Abhyanga*, *Swedana* and *Yoni Prakshalana* followed by Intra uterine *Uttarabasti* increased blood flow in uterus, fallopian tube, ovary and other adjacent organs²⁵. *Uttarabasti* with *Apamarga Kshara Taila* directly acts on the *Moolasthan* of *Artavavaha Srotas* by cleansing fallopian tubes and purifies the uterovaginal passage.

Effect on TORCH infection

Patient who has TORCH infection according to ayurvedic principles of treatment, it becomes mandatory to remove cellular level toxins from the body and boost up the immunity to fight with this chronic Rubella infection. This can be



effectively done by *Virechana*. *Virechana* is directly indicated in *Yonidosha*²⁶. Purification of *Garbhasambhava Samagri* is essential in cases having history of recurrent abortion due to TORCH infection, so that it should not harm the future pregnancy. Hence *Srotovishuddhi* is done by *Virechana*²⁷.

Effect on Anti Mullerian Hormone

Acharya Kashyapa while describing benefits of *Virechana Karma* mentioned that it helps in increasing quality and potency of Ovum²⁸. It showed that *Virechana* enhanced the structural and functional capabilities of reproductive gametes. Thus, *Virechana* improved HPO axis and follicular growth of ovary. *Uttarabasti* normalizes the function of *Vayu* and enhances *Garbhashthapana* in *Yoni*²⁹. *Abhyanga*, *Swedana* and *Uttarabasti* (local effect) increases blood flow in uterus, fallopian tube and ovary which leads to increased exposure of follicle to gonadotropins that is greater content of FSH & LH receptors. FSH, LH and Progesterone stimulate proteolytic enzymes activity which leads to increase distensibility of follicular wall and promotes ovulation²⁵.

Mode of action of Mustadi Yapana Basti

Infertility is the disease of *Tridosha* with predominance of *Vata* Vitiation. *Basti* is the main treatment of *Vata Vyadhi*²² and it is

well known for its preventive role in abortions³⁰. *Yapana Basti* performs both the actions i.e. cleansing and *Anulomana* by *Niruha* and oleation with the help of *Anuvasana*³¹. The disturbance in *Rasa Dhatu* will ultimately affect the functioning of *Artava Dhatu* according to *Dhatu Poshana Nyaya*. The clinical symptoms (Scanty Menses) and low Anti mullerian hormone observed in this case indicates *Dhatukshayajanya Vandhyatva*. It has been already explained in Ayurveda³². Apart from this, *Mustadi Yapana Basti* is specifically indicated as a superior line of treatment in the condition of *Vrishya Karma*. Its effect on Anti mullerian hormone helped in *Balajanana*, *Rasayana* and *Garbhashaya Shodhana Karma*. *Mustadi Yapana Basti* also eliminates *Pitta Sleshma Vyadhi* thereby patient keeps safe from harm effect of Hyperthyroidism¹¹.

Mode of action of oral therapy

Baladi Choorna has the property like *Vrishya*, *Garbhashthapana*, *Balya* and *Brinhana*. It helped in proper regeneration, proliferation and secretory phase of endometrium³³.

Phalaghrita has been attributed to *Yoni Pradosha Nashaka* and *Prajasthapaka* (establishes fetus). It has properties like *Deepana*, *Pachana*, *Vatanulomana*, *Vrishya*, *Rasayana*, *Balya* and *Brimhana*. *Phlaghrita*³⁴ contains Phytoestrogenic



effect of *Shatavari*³⁵ and estrogenic property of *Yastimadhu*³⁶ and *Mishreya*³⁷ which effects after metabolism and enters into blood following estradiol is converted into catacholestrogen 2 hydroxylase enzymes in hypothalamus. Catecholestrogen may influence GnRH release and regulate Hypothalamo Pituitary Ovarian axis thus regulating a reproductive functions³⁸ It increases the endometrium thickness and nourishes the endometrium for implantation and decreases the chances of miscarriage, still birth and preterm child. *Samshamani Vati* has properties like *Deepana*, *Pachana* and *Jirna-Jwaraghna* which helps in any infection. Furthermore, *Rasayana* (rejuvenator) and *Vayasthapana* properties helps a synergistic effect on immunity of body against various infections like TORCH infection in this case.

CONCLUSION

The results of study revealed that ayurveda treatment protocol including *Shodhana Karma (Virechana, Yapana Basti)*, *Uttarabasti* followed by *Shamana Aushadha* were positively affect multifactors in the form of patent fallopian tube, ovulation and proper endometrium pattern. Hence this treatment modality was effective in the multifactorial female

infertility. Therefore, these will be worth to consider in further studies of integrative medicine.



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