

MANAGEMENT OF PRIMARY INFERTILITY THROUGH AYURVEDA - A CASE REPORT

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ABSTRACT

Infertility can be considered as a major health care problem that can have drastic effects on couple's lives. Infertility is proven to be the most stressful experience with various psychological damage. Infertility can be manifested either as the inability to become pregnant, inability to uphold a pregnancy and inability to continue a pregnancy till term. There are various causes of infertility. In most of cases these three major causes of infertility are seen, including - male factor, ovulatory dysfunction or Tubal-peritoneal disease. A couple with married life of 3 years and wanting to conceive since 2 years visited

the OPD of RGGPGA College, Paprola, HP. Couple was already taking treatment for primary infertility from some other institution without any results. Wife was k/c/o Hypothyroidism with PCOS while husband was having unresponsive semenogram report to medical management. A treatment protocol including *Sanshodhan* karma was planned for them. In male, treatment planned was - *Yoga basti* (*anuvasanabasti* with *Balaashwagandhatail*, *niruha* with *Vidharigandhadiniruhbasti*) and *nasyakarama* (*Shodhannasya* with *Trikatuchurna* and *Nasya* with *Anu tail*). In female, treatment protocol was- *VirechanKarma* with *Trivritaadi yoga*, *Anuvasanabasti* with *Ksheerbala tail*, *Niruhabasti* with *Palashadikwath*, *lekhanabasti* with *Triphalakwath* and *Uttarbasti* with *Phalkalyan ghrita*. After *shodhankarma*, the couple conceived spontaneously. There was no adverse effect observed during the treatment.

KEYWORDS: *Infertility, Virechana karma, Niruhbasti, Lekhnabasti, Anuvasanabasti, Uttar basti, Nasya karma.*

INTRODUCTION

Infertility is the inability to conceive children after one year of unprotected intercourse (and there is no other reason, such as breastfeeding, postpartum amenorrhoea). Primary infertility is infertility in a couple who have never had a child. Secondary infertility is absence of a live birth for woman who desires a child and have been in a union for at least 12 months since last live birth, during which they did not use any contraceptive. The major cause of infertility include ovulatory dysfunction (20-40%), tubal and peritoneal pathology (30-40%); and male factors (30-40%). According to *Ayurvedic* prospective *Vandhyatva* /infertility is not an independent disease rather a cardinal feature of so many diseases. Proper time of menstrual cycle and ovulation (*Ritu*), healthy status of reproductive organs (*Kshetra*), nutritional status of mother (*Ambu*) and sperm & Ovum (*Beeja*) are considered as prime requisites for conception and healthy progeny. In *Sushruta Samhita*, *Vandhyatva* has been included among twenty *yonivayapada*. *Acharya Charak* and *Vagbhata* have referred *vandhyatava* due to abnormality of *beeja*, first time *Acharya Harita* has classified *vandhyatava* in detail. *Acharya Charak* has explained that “The woman is the origin of progeny” (C.Chi.30/5). He further explained that *vayu* expels *sukra*, destroys *Rajas* resulting in infertility.

CASE REPORT

A 26-year-old nulligravida female patient with married life of 3 years and wanted to conceive since 2 years. Patient was obese and was already taking medications for infertility from some other institution. She visited us for not getting results despite of treatment there. Patient has undergone investigations like USG, LH, FSH, serum Prolactin, TFT, RBS, follicular study; all reports were within normal range but USG finding shows Right ovarian simple cyst measuring 3.4X2.9cm with polycystic pattern in left ovary. She was taking medications for PCOS. She was k/c/o hypothyroidism and taking tab. thyroxine 12.5 mcg since 3 months. Her thyroid profile was within normal range under medication. Her menstrual cycle was irregular with oligomenorrhoea. On general physical examination and systemic examination –no pathology detected.

*Menstrual History:

*Age of Menarche -13 years.

*Married Life -3 years.

	Before treatment	After treatment
Duration	4-5 days	4-5 days
Interval	70-90 days	30-35 days
Amount	Moderate	Moderate

Foul smell, clots ,pain	Not present	Not present
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Contraceptive history: Nil

Cardio vascular system: Heart sounds (S₁S₂): Normal

No added sounds H.R.- 70/min.

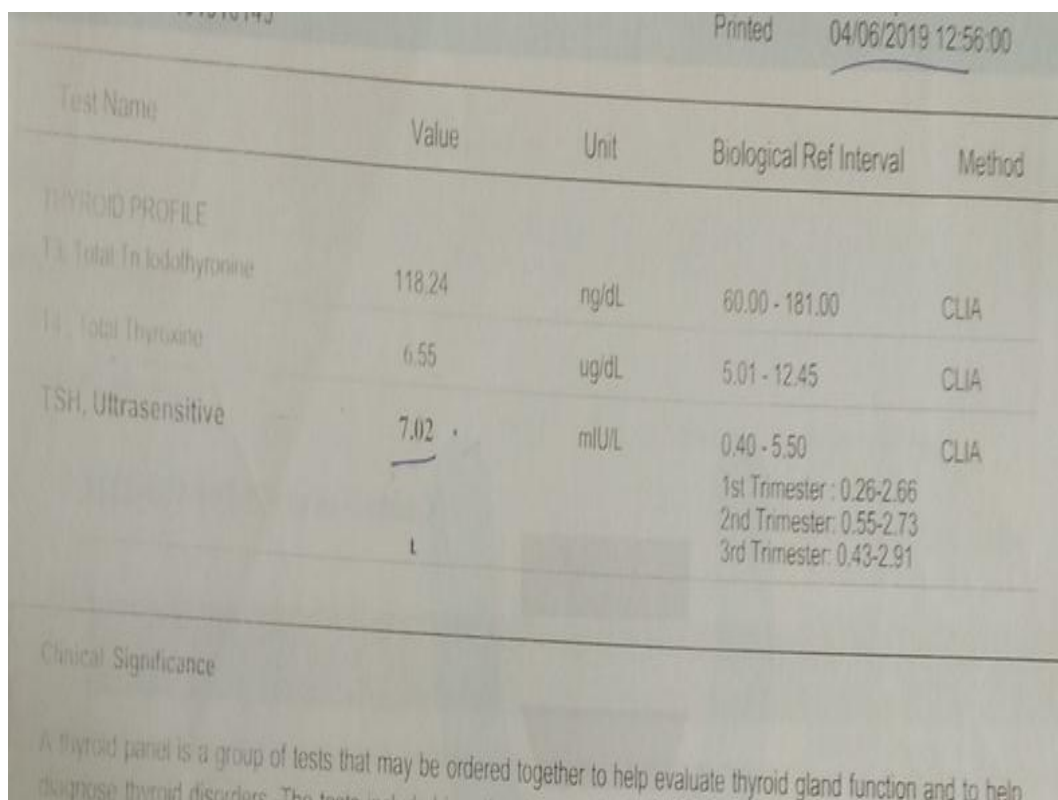
Respiratory system: B\L clear, air entry adequate

GIT system: Soft, non- tender, no organomegaly was detected.

Investigations

Date	Fsh	Lh	Sr.prolactin	Vdrl	Hbag	Hiv	Rbs
29/5/201	3.09 miu/ml	4.96 miu/ml	0.020ng /ml	Non Reactive	No Reactive	Non Reactive	80mg/dl

TFT: Before treatment		TFT: After treatment	
T3	118.24ng/dl	T3	1.31ng/dl
T4	6.55ug/dl	T4	10.22ug/dl
TSH	7.02UI/ml	TSH	3.39 UIu/ml



TFT before T/t on04/06/2019

Lab No. : 275463288	Age: 24 Years	Gender: Female	Received : 10/1/2020 2:12:14PM
A/c Status : P	Ref By : WALIA LAB	Report Status : Final	Reported : 10/1/2020 7:27:47PM

Test Name	Results	Units	Bio. Ref. Interval
THYROID PROFILE, TOTAL, SERUM (Chemiluminescent Immunoassay)			
T3, Total	1.31	ng/mL	0.70 - 2.04
T4, Total	10.22	ug/dL	5.74 - 13.03
TSH	3.39	uIU/mL	0.550 - 4.780

TFT after T/t on 10/01/2020

AGE/SEX	:	23 YRS/F
REFERRED BY	:	GAC PAPROLA
DATE	:	03/06/2019

ULTRASOUND WHOLE ABDOMEN

LIVER- Liver is normal in size, outline and shows homogenous echo pattern. No focal lesion or mass lesion is seen. Intrahepatic biliary radicals are not dilated.

GALL BLADDER: - Gall Bladder is distended physiologically, shows smooth walls and lumen is echofree. No calculus/mass lesion seen. GB wall thickness is normal.

PORTA: - CBD not dilated in upper traceable part. Portal vein is normal in calibre.

PANCREAS: - Pancreas is obscured by overlying bowel gases and cannot be assessed.

SPLEEN: - Spleen is normal in size, outline and echo texture.

KIDNEYS:-
 Right kidney is normal in size, shape and echo pattern. CMD well maintained. It shows p/o calcified concretion measuring 3 mm at mid pole calyx. No hydronephrosis is seen.
 Left kidney is normal in size, shape and echo pattern. CMD well maintained. No calculus visualized. No hydronephrosis is seen.

URINARY BLADDER: - Urinary Bladder is normal in distensibility, normal in wall thickness and lumen is echo free. No mass lesion /calculus seen.
 No evidence of significant retroperitoneal lymphadenopathy/ free fluid seen.

UTERUS: - The Uterus is anteverted. Uterus is normal in size, normal in outline & shows homogenous echo texture. No focal SOL seen.
 Endometrium is 7mm and central.

OVARIES:-Both ovaries are normal in size, normal in shape.
 Multiple small follicles are seen in Left ovary showing predominant peripheral pattern of distribution .
 Right ovary shows p/o simple cyst measuring 3.4x2.9 cm.
 Cul-de-sac is clear.
 Both adnexa are normal .No mass lesion seen.

IMPRESSION: -
 -Calcified concretion in right kidney
 -Right ovarian simple cyst
 -Polycystic pattern in left ovary

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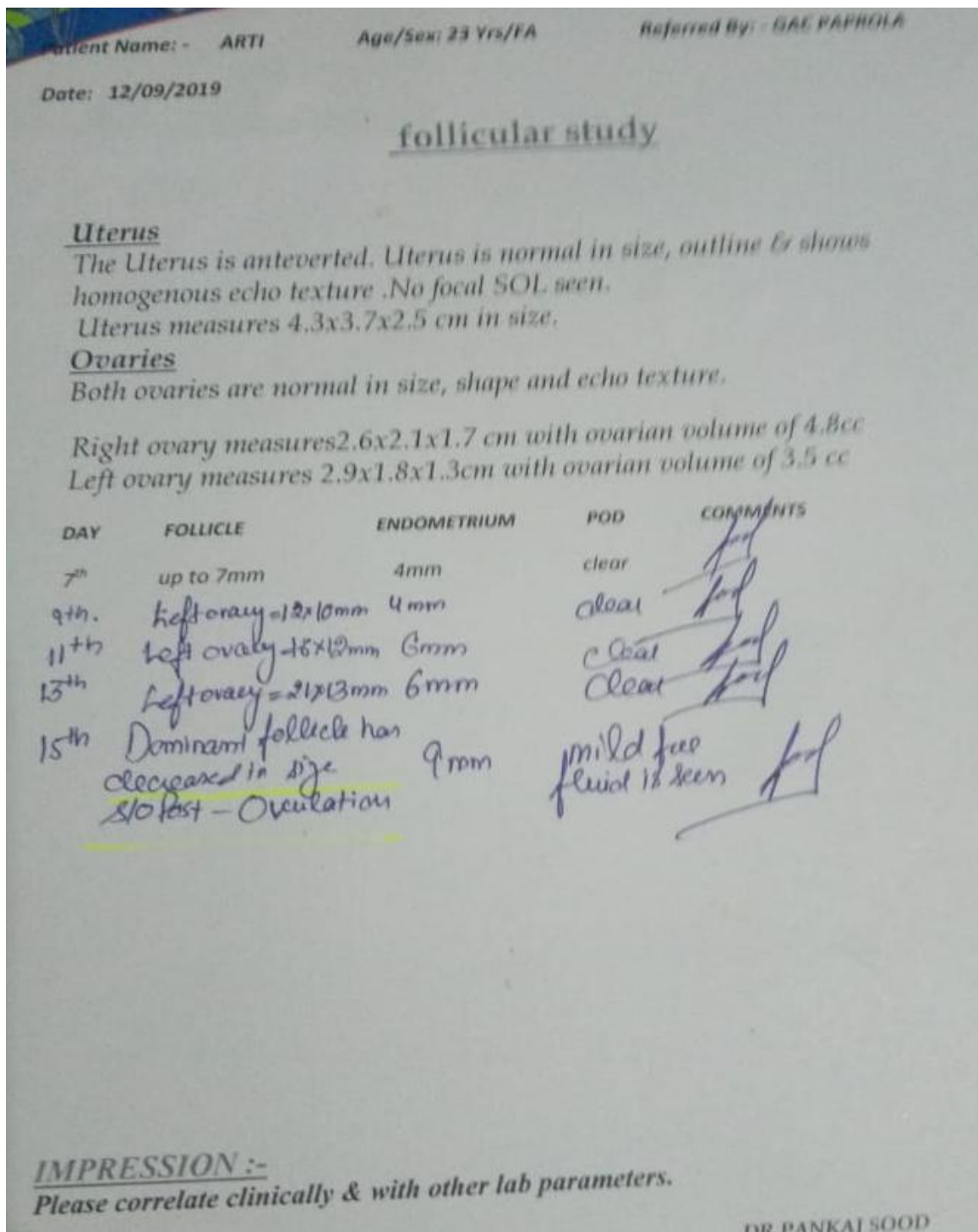
USG Interpretation

Date		Uterus	E.T	Ovaries	Impression
03/06/2019	USG WHOLE ABDOMEN	AV	7mm	Multiple small follicles are seen in left ovary showing predominant peripheral pattern of distribution Right ovary shows p/o simple cyst measuring 3.4x 2.9 cm.	*calcified concretion in right kidney *Right ovarian simple cyst *Polycystic pattern in left ovary
12/09/2019 (After treatment)	Follicular study	AV	9mm	Dominant follicle seen	Ovulatory cycle

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12/09/2019 (After treatment)	Follicular study	AV	9mm	Dominant follicle seen	Ovulatory cycle

Graffian follicular study on 12/09/2019

After treatment Graffian follicular study was done it showed ovulatory cycle, simultaneously couple was guided to try for conception.



NT ON 05/08/2020

Treatment planned for female

S. no	Procedure	Medicine drug	Dose	Duration
1	<i>Virechan karma</i>	<i>Trivritaadiyog</i>		
2	<i>Kal Karma basti</i>	<i>Anuvasana Vasti with ksheerbala tail</i> <i>Niruha Basti with Palaashadi Kwath</i>	100ml 600-800ml	10 days 6 days
3	<i>Lekhanabasti</i>	<i>Triphalawkwath</i>		3days
4	<i>Uttar basti (garbhashyagata)</i>	<i>Phal Kalyan Ghrita</i>	5ml	For 3days on alternate days after the completion of lekhnabasti
5	<i>SthanikSnehan</i>	<i>Balaashwagandha tail</i>		Before Procedure
6	<i>SthanikSwedana</i>	<i>Dashmoola Kwath</i>		Before Procedure

Mode of action

Poorvakarma–Local *abhyanga* with *balaashwagandhatail* and *swedana* of *dashmoolakwath* was given to patient in *Kati, udara, janghapradesh*. *Snehana* and *swedana* causes *vishyandana* and *dravibhuta* of *doshas* due to its *sara, sukshma, ushna, tikshna* properties.

Pradhaan karma:- *Virechana Karma* was done in 3 steps; *Deepanapachan* of *doshas* was done for 7 days with *chitrakadivati* (3gm in divided doses for 3 days), *Snehan* with Cow Ghee for 7 days in increasing dose as per *Agni* (1st day 30ml, 2nd day 60ml, 3rd day 90ml, 4th day 120 ml, 5th day 150ml, 6th day 180 ml, 7th day 210 ml). After *Snehana* was completed then 3 days *snehana* with *bala tail* and *sarvangavaspaswedanakarma* was done, next day *virechana* done with the *yog* containing *Trivrit, aragvadh, sanaya, gulabpushpa, draksha, saindavlavana* with *triphalakwath*. *Virechana* causes elimination of morbid bio–humors and useful in disorders of *pitta* associated with *vata* or *kapha*. According to *Acharya kashyapa* “*virechanabijambhavatiikarmukatama*”. *Kalbasti* was given after 9 days of *virechana karma*, (A1+N6+A6+A3=16). *Anuvasan* should be given first day, then 6 *niruha* and 6 *Anuvasana* given alternatively and at last 3 *anuvasana*), *Anuvasanabasti* with *ksheerbala tail* and *niruha* given with *palashadikwath*. *Ksheerbala* is *madhura rasa, laghu, snigdha, pichchhilaguna, sheetavirya, madhuravipaka*, it is *prajasthapan, brimhaniya, balya* and balances all three *doshas*, *madhur rasa, madhurvipak, sheetavirya* help in the *shaman* of *pitta dosha*, *pitta* is mainly responsible for any metabolic and hormonal change in body. It is also used to treat male and female infertility. *Niruhabasti* is given with *palashadikwath*,

palash is antioxidant, *plash* helps to improve sexual weakness and manage sexual dysfunction, because of its *vajikarana* (aphrodisiac) nature and *Kashaya* property. *Lekhanabasti* with *triphalakwath* was given to patient for 3 days after the clearance of menses. *Lekhana Basti* can remove the *avaranjanyavata* and clean the micro channels of the body. *Triphala* is *Deepan*, *Pachan*, *Lekhana*, *Ruksha*, *Yonivishodhana*, *Artavajanan* *Beejotsarga*, *Prajasthpana*, *Vrishya*, *Garbhasayashothhara*, *Vajikaran*, it reduces body weight by regulating *Jatharagni*. It helps to normalise the FSH level stimulate growth and development of follicle.

Uttar basti was given after one day of *Lekhanabasti*, *Uttar basti* with *phalkalyan ghrita* was administered through the vaginal tract in uterus of women. It is the *basti* which is given through *Uttara marga* (*garbhashyagata*). *Phalkalyan ghrita* is helpful in *yonivikara*, *vandhyatava*, *garbhiniroga*, *tridoshashamak* (Mainly *vatahara*), *balya*, *brihiniya*, *garbhada*, *rasayana*. The drugs administered through intrauterine route get absorbed in the systemic circulation and give positive feedback on H-P-O Axis, thus promote the growth of follicles and help in ovulation

Husband's profile

*Pt was 27 yrs old,shopkeeper by occupation. Patient was already taking medication for oligospermia from some other institution. He visited us for no improvement in semenogram despite medical management. Patient was advised investigations like complete Semen Analysis, Blood group, FBS, TFT, HIV, VDRL, HbsAg FSH, LH, Serum Prolactin & testosterone. His LH & FSH values were raised along with normal serum testosterone & prolactin, TFT showed hypothyroidism picture. Semenogram showed oligozoospermia with decreased sperm motility and pus cells, patient was put on *eltroxin* 12.5mcg for hypothyroidism with *doxycycline* 100mg 12hourly for 14 days for infection, *cap addyzoa* 2 bid (*punachandrodyaras*, *suvarnavang*, *shuddhashilajit*, *abharakbhasametc*), *cap kapikacchu* 1 bid, *cap multivitamin* 1 od. *Panchakarma* management protocol was planned to improve resistant semenogram report.

Family history: No relevant history

• General physical examination

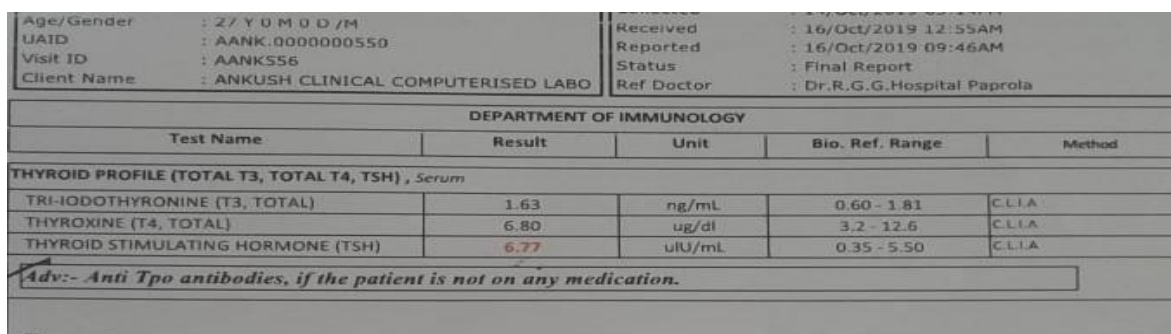
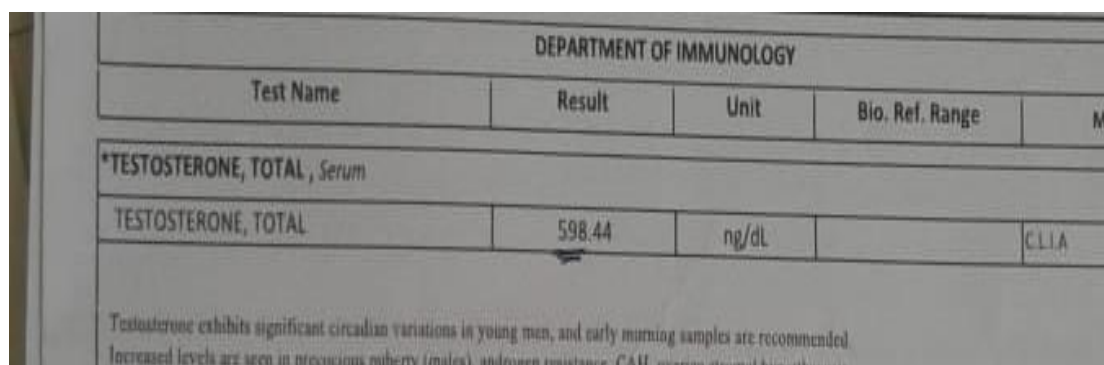
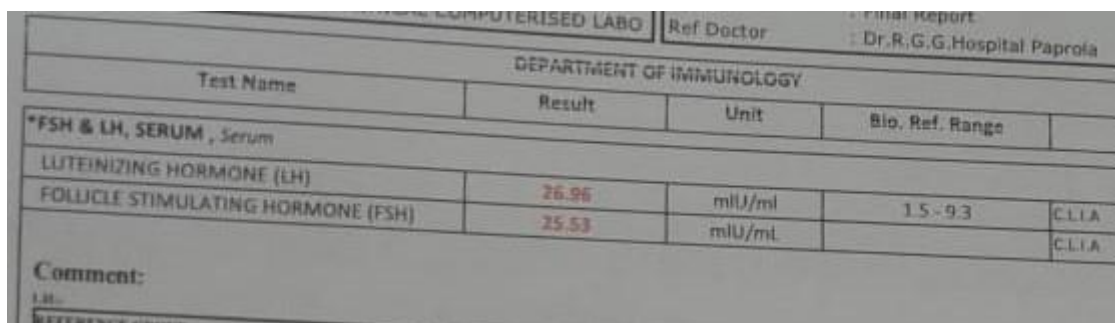
Built	Moderate
Pallor/icterus edema /cyanosis /clubbing /lymphadenopathy	Not present
B.P	110/74mmof Hg
P.R	84/min
Temperature	97.4F

Systemic examination

CVS	S1,S2 Normal
CNS	Conscious,well oriented
RS	B/L air entry adequate

Investigations (Before treatment)

B.G	FBS	HIV	VDRL	HbsAg	Prolactin	FSH	LH	Testosterone	B.G	FBS
0+	76 mg/dl	N.R	NR	N.R	2.5 ng/ml	25.53 mIU/ml	26.mIU /ml	598.44 ng/dlg/dl		

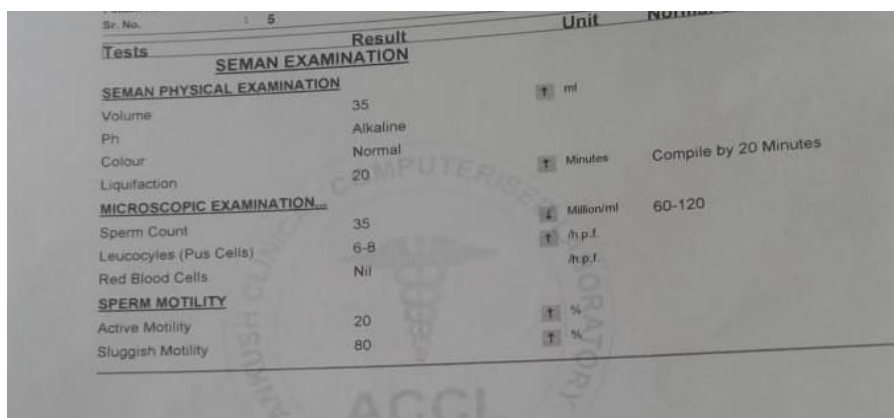


• TTT

Before treatment
Date 14 /10/2019
T3 -1.63 ng/ml
T4-6.80 ug /dl
TSH-6.77u IU/ml

• Semen analysis before treatment

Date	Volume	less than 2.0 ml
10/07/19	Ph	Alkaline
	Sperm count	Less than 35 million /l
	Pus cell	6-8hpf
	Rbc	Nil
	Active motility	More than 20 %
	Sluggish motility	60%



• Investigation after treatment

FSH	18.45mIU/ ml
LH	19.86mIU/ ml
Testosteron	600ng/dl

T3	1.47ng/dl
T4	5.00ug/dl
TSH	3.48u IU /ml

Tests	Result	Unit	Normal Value
SEMEN EXAMINATION			
SEMEN PHYSICAL EXAMINATION			
Volume	3.0	ml	
Ph	Alkaline		
Colour	Normal		
Liquifaction	20	Minutes	Compile by 20 Minutes
MICROSCOPIC EXAMINATION...			
Sperm Count	55	Million/ml	60-120
Leucocytes (Pus Cells)	1-2	/h.p.f.	
Red Blood Cells	Nil	/h.p.f.	
SPERM MOTILITY			
Active Motility	60	%	
Sluggish Motility	40	%	
HARMONAL ASSAY			
HARMONAL ASSAY			
T3	1.47	ng/ml	0.60-1.81
T4	5.00	ug/dl	4.5 - 12.6
TSH	3.48	uIU/ml	0.35 - 5.50
FSH	18.45	mIU/mL	2.50-116.30
LH	19.86	mIU/mL	0.70-54.0
TESTOSTERON TOTAL	600	ng/dL	17-76

• Semen analysis after treatment

Date	Volume	More then 2.0
11/02/2020	ph	alkaline
	sperm count	55 million/ml
	pus cell	1-2hpf
	rbc	nil
	active motility	60%
	sluggish motility	40%

• Treatment planned for male

S. no	Procedure	Medicine drug	Dose	Duration
1.	ShodhanNasaya karma	Trikatuchurna		For 3 days
2.	SnehanNasya	Anu tail		
3.	KalKramaBasti	AuvasanabastibyBala ashwagnadadi Tail	100 ml	10 days
		NiruhBastibyVidariga ndhadikwath	600 - 800ml	6 days
4.	Sthaniksnehana	Balaashwagnadha tail		Before procedure
5.	Sthanikswedana	Dashmoolakwath		Before procedure

Mode of action

Nasya karma

Firstlyshodhan Nasya was done for 3 days after Shodhan Nasya, Snehana Nasyawas given for three days with increasing dose from 8 Drops to 32 drops than Snehan Nasya was done in alternative days for four days with constant dose of 32 drops in each nostril. Nasya act on brain (pituitary) because “NASA HI SIRSO DWARAM “Trikatu is ‘Katu –Tiktarasa’Usna Virya, Madhura rasa, and Vata –Kapha Nasaka Srotoshodhan, Vata anuloma,

Strotomukhavishodhana. Anutailais Vataghana, Brimhana, Snehna. Nose is the gateway of head. *Nasya Karma* is the process which eliminates the vitiated doshes of the *Urddhvangya* ensuring the smooth functioning of the brain and ultimately whole body. The drug used for *Nasya* may be acting through this olfacto-hypothalamo-pituitary pathway and improving the functioning of the endocrine glands and help to regulate the follicular stimulating hormone (FSH), Luteinizing hormone (LH), Thyroid hormones, Testosterone hormone.

After *Nasyakarma* next day *bastiwas* given by *kalkrama*

A- *Anuvasana basti*

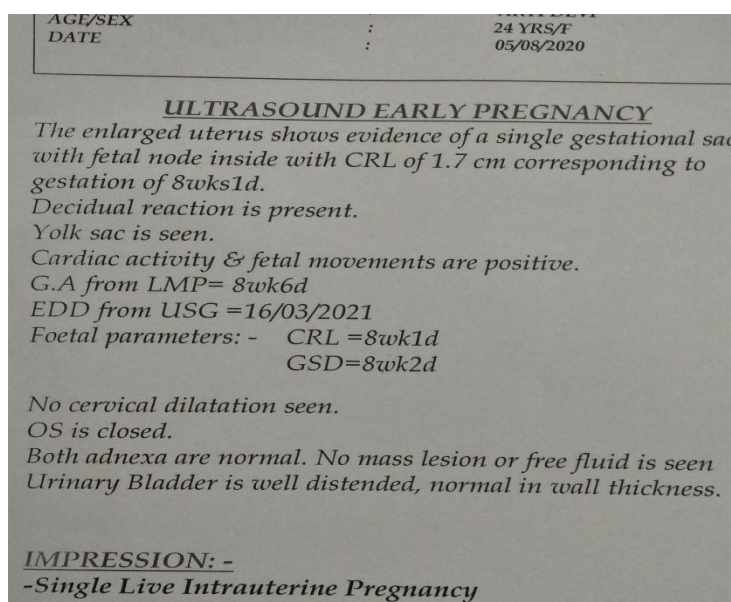
N- *Niruh basti*

1A	2A	3N	4A	5N	6A	7N	8A
9N	10A	11N	12A	13N	14A	15A	16A

Anuvasanabasti is given with *Balaashwagandadi Taila*, *Bala (Sidacordifolia)* is *rasayan*, *vajikarana*, *Balya*, *madhurras*, *laghu*, *snigdha*, *pichchhila* in *guna*, *sheet* in *virya*, *Ashwagandha* is considered as a rejuvenating, *rasayan*. Hypothalamic –pituitary –gonadal (HPG) axis is known to be involved in stress response and controls spermatogenesis, *Ashwagandha* improves blood circulation throughout the body and enhances sperm quality naturally. *Vidarigandhadigana* is *Vata-Pittanashak*, *vipaka -madhur*, *Ras-madhurtikta*, *Guna–snigdha*, *virya* is *sheeta*. These drugs are *vrishya* and *shukravridikara*.

RESULTS

After the *Sanshodhan karma* the patient conceived, USG findings on 05/08/2020 shows Single Live Intrauterine Pregnancy.



DISCUSSION

Panchakarma hold a unique importance in Ayurvedic treatment. *Ayurvedic* approach is very beneficial in infertility. Cleansing measures balance the *doshas*. *Virechana karma* cleanse all the body tissues and detoxify and purify the body, *virechana karma* also indicated in the treatment of all *yonirogas*. It is helpful in *beejamkarmuktavam* (ovulation). *Acharya* mentioned *Bastitreatment* as very useful treatment in *Vandhyatava* i.e.in infertility. The infertile women having undergone cleansing by sequential use of purifying procedures, should be given *bastichikitsa* to regulate *vata dosha* for nourishment and for the formation of *sudhabija*. Parasympathetic activity is mainly responsible for *Apanavayu* activity. Basti given through rectum will stimulate this parasympathetic nerve supply, which help in release of ovum from the follicle in ovary. *Apanavayu* is the type of 'VataDosha', which controls the *Shukra Dhatu* (semen). *Acharya Sushruta* explained that there was vitiation of *Apanavayu* and *Vyanvayu* in the *Shukradosha*, because site of *Shukra* is the whole body and *Apanavayu* is responsible for the proper expulsion of *shukradhatu*. Vitiation of *Apanavayu* can impair the function of *Shukra*. It is *Vatahara, Balya, Brihniya, Garbhada* and *Rasayana*.

Nasya: Nasyaushadhi reaches to brain via nasal route and act on higher centers of brain controlling different neurological, endocrinal and circulating functions and thus showing local as well as systemic effects. It regulates Hypothalamus–pituitary–gonadal (HPG) axis.

CONCLUSION

As per *Ayurvedic* texts *Shodhan* should be done before *vajikaranchikitsa*. It is an effective and safe treatment for infertility. In cases unresponsive to *Shamanachikitsa*, *Sanshodhanchikitsa* is a ray of hope, rather it should be done as prima facie to *Shaman chikitsa*.

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