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Ayurvedic Management of Male Infertility Due to *Granthi Sukradusti*: A Case Report

Rajitha R Warriar,[1*] Hiran Mary Thomas K [2]

[1]Associate Professor, [2] PG Scholar, Dept of *Prasuti Tantra Evam Streeroga*, Government Ayurveda College, Tripunithura, Kerala, India

ABSTRACT:

Infertility carries a significant emotional, psychological, and social burden for individuals and couples, affecting not only their own lives but also of their families and communities. The journey through infertility can be physically demanding, emotionally draining, and financially straining. This is a case of infertility due to both male and female factors, in which clinical details of male partner are discussed here. Couple came with complaints of inability to beget a child even after 7 years of unprotected sexual life. Male had complaints of reduced motility with hyperviscosity and increased liquefaction time in the semen analysis report and dry, scaly skin lesions with itching in bilateral lower limbs diagnosed as *Vicharchika* (a type of skin disease). Female partner was a known case of PCOS. Semen hyperviscosity can cause male factor infertility both in-vivo and in-vitro with a prevalence rate between 12-29%. It can impair normal sperm movement in the female reproductive tract. In Ayurvedic perspective, this male factor infertility may be diagnosed as *Vandhyatva* due to *Granthibhutha Sukradusthi* caused by *vata kapha* vitiation. The treatment mainly focused on *sodhana* and *samana* of *vata kapha dosa,* thus promoting spermatogenesis and modifying the functions of accessory reproductive glands. The female factor was also addressed concurrently. As a result, the quality of *beeja* (sperm and ovum) improved and achieved pregnancy. Attainment of normal seminal parameters and successful conception through 5 months of intervention highlights the effectiveness of Ayurveda in addressing fertility issues in men.

KEYWORDS: Asthenozoospermia, *Granthi Sukra*, Liquefaction Time, Male Infertility, Prostatic Disease, Semen Hyperviscosity.

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***Corresponding Author:**
Dr. Rajitha R Warriar
Associate Professor,
Dept of *Prasuti tantra Evam Streeroga*, Government Ayurveda College, Tripunithura, Kerala, India
Email: drrajithawarriar@gmail.com

INTRODUCTION:

Infertility is defined as failure to conceive within one or more years of regular unprotected coitus. Conception depends on the fertility potential of both the male and female partner. The male is directly responsible in about 30–40 percent, the female in about 40–55 percent and both are responsible in about 10 percent cases. The remaining 10 percent, is unexplained. [1-2] Semen is made up of matured sperms and fluids secreted by the male accessory glands, which contain proteins necessary for the coagulation and liquefaction. Any abnormalities in seminal parameters may contribute as a cause for male infertility. One among them is abnormal viscosity of seminal fluid which is caused by hypofunction of the prostate or seminal vesicles, infection, and high levels of seminal leukocytes. Oxidative stress, as well as biochemical and genetic factors, can also contribute to Semen hyperviscosity which has a prevalence of 12-29 %.[3]

According to *Acarya Charaka*, a person without children is like a lonely tree without any fruits, shadows, or pleasant scents on its branches and therefore explains the need for treatment of infertility especially male factor in detail.[4] Ayurveda considers four essential factors for conception -*Ritu* (reproductive period) *Kshetra* (female reproductive tract) *Ambu* (nutritional factors), and *Beeja* (sperm & ovum). Any abnormality in any of these factors will affect the fertility outcome. Abnormalities of *beeja* or *sukra* (Semen) are explained in *ashta sukra dusti* and *granthi sukra* is one among them which is due to *vata kapha* vitiation. Semen hyperviscosity may be correlated to *Granthi Sukra Dusti*, so *vata kapha samana* and *sodhana* is the needed treatment. *Palasakshara siddha ghritha* (medicated ghee) mentioned for *granthi sukra dusti* [5] and *kalyanka ghritha* [6] indicated for *arethasi* (azoospermia or aspermia) and *apraja* (primary infertility) were also selected for targeted action. *Kamadeva choorna* mentioned in *Kuchimara tantra* was opted for v*ajeekarana (aphrodisiac)* purpose.[7]

CASE REPORT:

A married couple presented with inability to beget a child even after 7 years of unprotected sexual life on 2023 October 26th in OPD. Male aged 36 years old working as a clerk in government office presented with abnormal seminal parameters - viscosity thick, liquefaction time- 2 hour and reduced motility rate (NP+PM=45%) and dry scaly skin lesions with itching over bilateral lower limbs. Spouse aged 33 years was a known case of PCOD and thyroid dysfunction with irregular delayed cycles. They had a history of induced abortion due to reduced cardiac activity at 10 weeks of gestation in the year 2022. He had no family history of infertility. Systemic examination revealed scaly skin and hyper pigmented patches in bilateral lower limbs. Local examination revealed presence of bilateral normal testicles and normally positioned external urethral orifice. Urine routine showed presence of calcium oxalate crystals and 1-2 pus cells. Routine Blood reports were normal. So, the case was diagnosed as *granthi sukra dusti* and treated accordingly. During the course of treatment wife conceived.

OBSERVATIONS AND RESULTS:

The time line of events, observations, interventions done are detailed in Table No 1,2 and results are detailed in Table No 3. Semen Analysis reports and Urine routine examination reports before and after treatment added as figure 1 and 2.

Table-1: Timeline of Observations and Interventions

Date	Observation/Results	Treatment
January 2017	Married, tried for conception for 6 months but failed	No treatment taken
August 2017	**1st Semen analysis** revealed increased liquefaction.	No treatment taken
June 2022	Approached OPD complaining abnormal seminal parameters.	Ayurvedic management done for 5 months
November 2022	Wife got conceived, but induced abortion due to reduced cardiac activity at 10th week of gestation.	Dry, scaly rashes over skin of bilateral developed with itching.
Nov 2023	**2nd Semen analysis** dated 5.11.23 showed increased liquefaction (2hr 30 minutes) and high viscosity with reduced motility (NP+PM=45). Also had dry scaly rashes in skin with itching- IPD Management was done.	1. *Udwarthanam* (powder massage) 2. *Achasnehapanam* (oleation therapy) 3. *Abhyangam* (oil massage) *and Swedam*(Fomentation therapy) 4. *Virechanam* (Purgation) 5. *Yogavasthi* -8 days; 5 *Sneha vasthi* and 3 *Rajayapana vasthi* **Discharge medicines** 1. *Kalyanaka ghrta* 15gm Hs 2. *Panchatikthaka Kashayam* 90ml bd 3. Impurin tab.1 bd 4. *Vitpala* Kera-External application on dry, scaly skin lesions 5. *Eladi choorna*- External application.
29-02-24	**3rd semen analysis** dated 18.2.24 revealed normal viscosity and liquefaction time reduced to 1hr, motility normal (NP+PM=50), sperm concentration was 17 million/ml. *Sadyasnehana* and *swedana* and *virechana* was done at OPD level and continued internal medicines for 2 months.	1. *Sadya snehapana* with *goghritha* -10gm bd-3 days 2. *Abhyanga* and *ushnambu snanam*-3 days 3. *Virechana* with *avipathi churnam*-20 gm-1 day 4. *Peyadi krama*-3 days 1. *Panchatikthaka kashayam 45ml bd* 2. *Punarnavadi kashayam45 ml bd* 3. *Palasa kshara 250 gm od with kalyanaka ghritha.* 4. *Kalyanaka ghritham ½ teaspoon od*

		5. *Kamadeva churnam 6gm bd with 30ml milk.* 6. *Vitpala Keram*-external application over skin lesions in lower limbs.
8-04-2024	**4th Semen Analysis** dated 7.04. 2024 Normozoospermia. Vol-2mlpH-8.1; Liquefaction time-30 minutes, Sperm Concentration-62 million/ml; Motility-50%; Normal Form-86%. Wife got conceived. UPT positive on 8-05-24.	Continued same medicines.

Table-2: Therapeutic Interventions in detail

	SODHANA			
Date	**Procedure**	**Medicine**	**Duration**	**Remarks**
20-12-23 to 27-12-23	*Udwarthana*	*Vara churnam +Nimbadi churnam*	7 days	Rukshana attained
29-12-23 to4-1-24	*Achasnehapana*	*Tikthaka ghrta* 25ml, 50ml, 100ml, 160ml, 240ml, 300ml, 350ml from day 1 to day 7 respectively.	7 days	Loose bowels and tiredness noticed. *Samyak snigdha lakshana* attained.
5-1-24 to 7-1-24	*Abhyangam,swedam*	*Vitpala+Eladikeram*	3 days	
8-1-24	*Virechanam*	*Vellerugu tailam* 15ml with warm water	1day	4 *vega* noted
9-1-24 10-1-24 11-1-24 12-1-24 13-1-24 14-1-24 15-1-24 16-1-24	***Yoga Vasthi-8*** *Sneha vasthi-1* *Sneha vasthi-2* *Rajayapana Vasthi-1* *Sneha vasthi-3* *Rajayapana vasthi-2* *Sneha vasthi-4* *Rajayapana vasthi-3* *Sneha vasthi-5*	*Sneha vasthi-sahacharadi mezhukupakam*-120 ml *Kashaya vasthi - Musthadi Rajayapana vasthi (*made with *mustadi ksheera kashaya*-500ml, *yashtyadi kalka*-30gm, *sukumara ghritha-120ml, mamsarasa-120ml,* honey-*120ml, saindhava-10gm)*	8 days	
29-02-24 to 2-03-24	*Sadya Sneha pana* with goghritha 15gm bd along with *Abhyangam ushnambu snanam*	*Eladi keram +Vitpala Keram*	3 days	
3-3-24	*Virechana*	*Avipathi churna* 20 gm	1 day	5 *vega*
SHAMANA				

Date	Therapuetic Approach	Medicines prescribed
17-01-24 to 28-02-24	*Deepana* *Pachana* *Rakthaprasadanam* *Anulomana* *lekhana bhedana* *Kapha vata samanam*	1. *Panchatikthaka kashayam* + 2. *Punarnavadi kashayam*-45ml each bd before food- 6am and 6 pm 3. *Palasa kshara*-250mg od along with ½ teaspoon K*alyanaka ghritha* at 11am. 4. *Kalyanaka ghritham* ½ teaspoon-once daily at 11 am. *Vitpala Keram*-External Application.
5-03-24 to 08-04-24	*srotosodhanam* *vajeekaranam* *rasayanam*	1. *Panchatikthaka kashayam* + 2. *Punarnavadi kashayam*-45 ml each bd before food at 6am and 6pm. 3. *Palasa kshara*-250 mg with ½ teaspoon *Kalyanaka ghritha* at 11am 4. *Kalyanaka ghritham*-1/2 teaspoon-11 am 5. *Kamadeva churnam*-6gm bd along with 30ml milk at 8am 8pm before food *Vitpala Keram*-External Application over dry scaly skin lesions.
09-04-24 to 22-07-24		1. *Panchatikthaka kashayam* + 2. *Punarnavadi kashayam* 45ml each bd before food at 6am and 6 pm 3. *Palasa kshara*-250mg with 1/2 teaspoon *kalyanaka ghritha*-once daily. 4. *Kalyanaka ghritham-1/2 teaspoon at 11am.* 5. *Kamadeva churnam*-6gm bd with 30ml milk before food 8am 8 pm 6. *Vitpala Keram*-external application over dry scaly skin lesions Exitox Tab 1 bd after food

Note: During shaman chikitsa following advises were give i.e. Avoid hot, spicy food, tea, coffee hot water bath Use milk, ghee, wheat, fruit juices more.

Table-3: Results

Seminal Parameters	Before Treatment (5.11.23)	Follow up 1 (18.2.24)	Follow up 2 (7.4.24)
Viscosity	Thick	Normal	Normal
Liquefaction	2 hours 30 minutes	1 hour	30 minutes
Motility	45%	50%	50%
Sperm concentration	77 million/ml	17 million/ml	62 million/ml

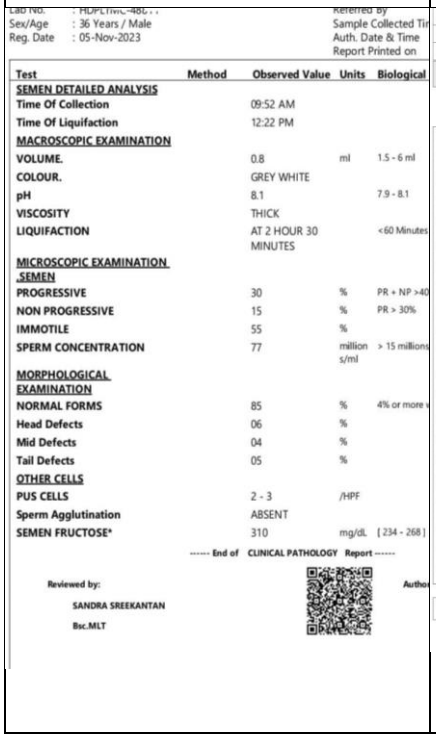
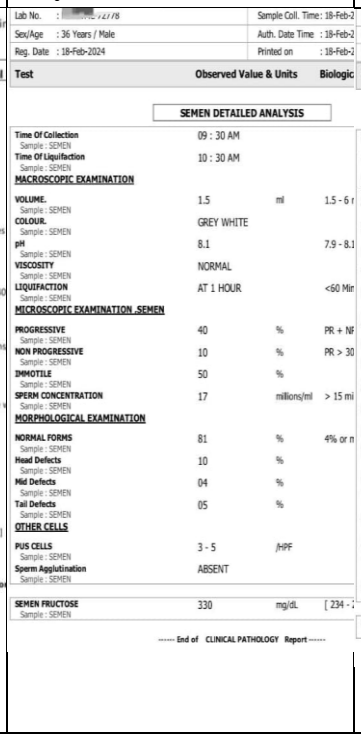
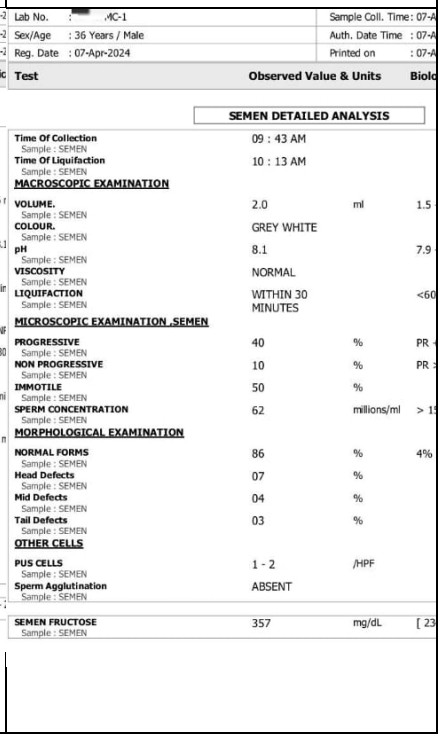
Semen Analysis before treatment	Semen analysis after 59 days of treatment	Semen Analysis after 108 days of treatment
		

Figure- 1: Semen Analysis Reports

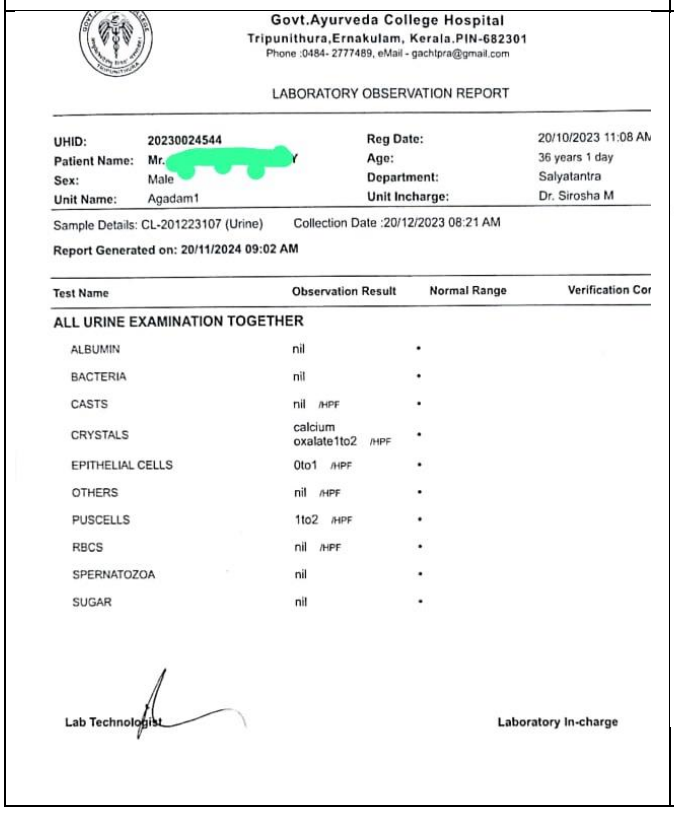
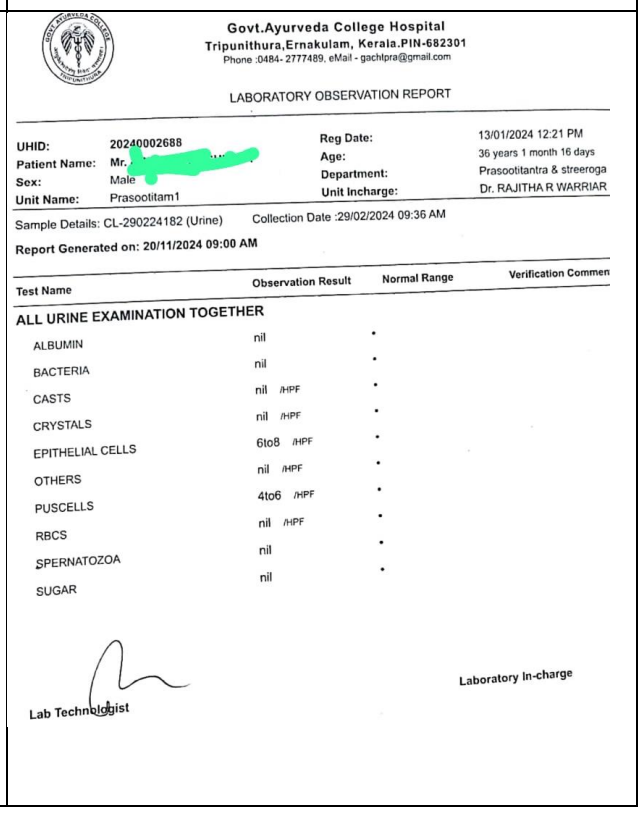
Urine Routine Before Treatment	Urine Routine After Treatment
	

Figure- 2: Urine Analysis Reports

DISCUSSION:

Here kapha *vata dusti* along with *rasa raktha dusti* manifested in three *adhisthana,* mainly *vrshana*, *vasthi* and *twak* as *granthisukra* (hyperviscous semen), *mutrasmari* (crstaluria), and *vicharchika* (eczema), respectively. So, treatment mainly focused on *vata kapha sodhana* and *samana.*

For *udwarthana, varachurna* and *nimba churna* were selected considering both *adhisthana rasa-raktha* and *sukra.* For *snehapana, tikthaka ghritha* was selected [8] and for *abhyanga, vitpala kera,* which is a *vata kapha samana* drug mixed with *eladi keram* was taken. For *virechana vellerugu tailam,* a medicine mentioned in Siddha medicine indicated in eczema and asthma, and *avipathi churnam* were selected at two instances considering the dosa vitiation at *rasa, raktha dhathu* and *sukra dhatu* levels.

Yoga Vasthi was given with S*ahacharadi tailam mezhukupakam* [9] as *sneha vasthi* and *Mustadi rajayapana vasthi* [10] as *Kashaya vasthi. Sahacharadi tailam* is *kapha vata samanam* and *Musthadi RajaYapana Vasti* performs the dual actions of *Shodhana* and *Rasayana* simultaneously. *Rajayapana vasthi* also has *Sadyo-Balajanana* (improves strength quickly), *Vatashamaka* and *Vrshya* properties. *Vasthi,* when administered properly, remains in the large intestine, pelvis, and below the umbilicus for some time and the potency of the *Vasti* materials spreads in the whole body through the channels and gives its effect quickly. An immense number of nerves that are located in Enteric Nervous System can be nourished easily and quickly by *vasthi* and hence provide *Sadyo balajanana* and *Rasayana* effects. It helps in promoting spermatogenesis and also nourishes the local reproductive glands, thereby improving their secretions.

Panchatikthakam kashayam [11] and *Punarnavadi kashayam* [12], by their *tiktha rasa* and *kapha pitta hara* properties, purify *rasa raktha dhathu* and promote the formation of *Sudha Sukra. Palasakshara* had been given along with *kalyanaka ghritha,* in which *palasa kshara* is a specific drug mentioned in *Granthi sukra* [5], and *Kalyanaka ghrta* had *srotosodhana* property and enhanced the absorption of *kshara.* The mode of action of *Palasha Kshara* can be explained by its properties such as *Mootrala* (diuretics), *Lekhana* (scrapping), *Bhedana* (breaking up), *Pachana* (digestion), Basti *Shodhana* (purgative of bladder), and *Tridosha Shamaka* (pacifying three bodily humors). [13] *Kamadeva churna* mentioned in *Kuchimara Tantra* was given as a *Vajeekarana oushadha* for about 3 months.[7]

Administering both *sodhana* and *samana* therapies along with *Vajeekarana* helped in resolving hyperviscosity, thereby providing a favourable environment for the formation of healthy sperm in male. Female was also treated concurrently. Thus, the protocol helped in the formation of healthy *beeja* and the attainment of fruitful conception.

CONCLUSION:

Dosa dusti can have manifestations in different sites and should be taken into consideration while selecting medicines and treatment. In this case, *sodhana* and *samana* therapy helped to bring back the equilibrium of vitiated *vata kapha dosa* in multiple *adhistana-sukra, mutra,* and *twak* and helped in resolving hyperviscosity, crystalluria, and eczema. It also helped in attaining the optimum quality of semen suitable for conception.

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