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CASE SERIES

EFFICACY OF VAJIKARANA IN SHUKRA DUSHTI W.S.R. TO OLIGO-ASTHENO-TERATAZOOSPERMIA SYNDROME: RETROSPECTIVE CASE SERIES

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Abstract:

Though population of the world is increasing day by day yet 20-30% populations of the world are the victims of the infertility. In India, 1 out of 10 couples suffer from infertility and about half of cases, men alone are contributory. Causes of Infertility are being impaired sperm production, or its function, impaired sperm delivery, due to vicious life style and environmental exposure. Oligoastheoteratazoosperma syndrome is the condition commonly prevailing and is concerned with semen production and function. In Ayurveda, Shukra dushti is considered to be the main cause for the male infertility. Absence or production of less quantity of semen is the main feature and explains 8 pathological entities which damages normal composition of semen. Vajikarana (Aphrodisiac therapy) is the specialized branch of Ayurveda dealing with Shukra Dushti and Klaibya (Semen disorders and Sexual Dysfunction). Though it mainly concentrates on Shukra dosha (seminal disorders) and Vandhyatwa (Infertility), but it also emphasizes about Vyadhi (Different pathologies), Functions of Dosha, Dhatu, Mala, Agni, (Metabolic conditions); Manas,- (Psychosomatic conditions); lifestyles and Poorvajanma kruta karma (Deeds of previous life). Srushti Fertility center is the specialty OPD which is attending the cases of infertility since 07yrs.the statistic revealed that, Out of 10 cases of Male infertility, 1-2 cases are diagnosed as OAT Syndrome. By proper counseling one can correct their skepticism about the thoughts of infertility; treatment is planned based on Pratipursuha siddhanta(theory of Individuality). Here is the presentation of 20 cases of OAT Syndrome coming under different types Shukra dushti.

Keywords: OAT syndrome, Shukra dushti, Vajikarana.

Introduction:

Though population of the world is increasing day by day yet 20-30% populations of the world are the victims of the infertility. In India, 1 out of 10 couples suffer from infertility

and about half of the cases, men alone are contributory. Infertility means that a couple has failed to achieve a pregnancy within one year of regular (at least three times per month) unprotected intercourse. Male factor is present in

approximately 40% of infertility cases. It is considered a male factor when an alteration in sperm concentration and/or motility and/or morphology could be found in at least one sample of two sperm analyses which comply with World Health Organization (WHO) 1999 guidelines collected between 1–4 weeks apart.¹

OAT syndrome:

In 40–60% of cases the only abnormality in the semen analysis and there is no relevant history or abnormality on physical examination and endocrine laboratory testing (idiopathic male infertility). Semen analysis reveals a decreased number of spermatozoa (oligozoospermia), decreased motility

(asthenozoospermia) and many abnormal forms on morphological examination (teratozoospermia). Usually, these abnormalities come together and are described as the OAT-syndrome (oligo-astheno-teratozoospermia).¹ Oligo-astheno-teratozoospermia (OAT Syndrome) is the condition presenting in males which is diagnosed by isolated astheno ± teratospermia (no alteration in sperm concentration); moderate (sperm concentration $< 20 \times 10^6/\text{mL}$ and $> 5 \times 10^6/\text{mL}$); or severe (sperm concentration $< 5 \times 10^6/\text{mL}$).² Etiological factors are tabulated and listed below in the table no.1.²

Table no.1: Etiological factors for OAT syndrome.

Causes:	%
No demonstrable cause	48.5
Sexual factors	1.7
Urogenital infection	6.6
Congenital anomalies	2.1
Acquired factors	2.6
Varicocele	12.3
Endocrine disturbances	0.6
Immunological factors	3.1
Idiopathic abnormal semen (OAT syndrome)	26.4
Other abnormalities	3.0

OAT syndrome: Ayurvedic approach:

Prajotpadana (Fertility) is the main karma of Shukra dhatu³ and one of the main artha's to be fulfilled by the individual in his lifespan.⁴ Vitiated Tridosha (three humours); impaired Agni; Impaired production of Dhatu (Rasa to Shukra) depletion of Soumya Bhava; all these factors impair the Shukra Dhatu. Ayurveda Encompasses these Tridoshaja dushti and explains 8 types shukra dushti i.e Vataja Pittaa, Kapahaj; Granti; Kunapagandhi shukra; Pooti;

Puya; Mala samsrushta shukra.(seminal abnormalities)⁵

Case Series:

Here is the case presentation of 20 diagnosed cases of OAT Syndrome during the last 3years visiting to Srishti Ayurveda fertility center; a unit of KLE Ayurveda Hospital, Belgaum. Common complaints being no issues since 2-3 years of married life associated with anxiety, depression, semen disorders and Male sexual dysfunctions. Treatment given was based

on signs and symptoms, complaints, Dosha Dushya etc. and semen analysis. Statistical data was interpreted by using semen analysis of before and after treatment with Shodhan wherever necessary along with Shamanoushadhis. Data was statistically tested using Student paired 't' test and significance was tested for 0.005% confidence level.

Materials and Methods:

Methodology: Case files of the patient attending fertility center of KLE Ayurveda Hospital, Belgaum were taken, and the diagnosed OAT syndromes were ruled out and enrolled for retrospective case studies irrespective of their cast, Socio-economic status.

Inclusion Criteria:

- Age limit above 22yrs.
- Sperm count- < 30million.(Oligospermia)
- Motility- < 40% or less.
- Morphology- < 40-50%.(Asthenospermia)

Exclusion Criteria:

- Patients who discontinued their treatment.
- Patients with Secondary/higher complications.
- Patients with Azoospermia.
- Patients with Necrozoospermia.

Methodology for the study:

The cases were selected from the databases. The cases which come under inclusive criteria were ruled out and included for the study.

Parameters: Semen Analysis, Sperm count, Sperm Motility (RLP, SLP, NP) Sperm

Morphology (Head; Neck, Body, Tail abnormalities.) were taken as parameters.

Results: Data generated from the semen analysis was subjected for "t" Test and P value was checked for 95% and significance was obtained.

Table No-2: Diagnosis of patients as per Retopariksha, Prakriti, Reto varna, Reto gandha wise

Reto dusti wise distributions of patients		Prakriti wise distribution,		Shukra Varna wise distributions		Sukraganda wise distribution	
RETO PAREEKSHA	No. of Patients	Prakriti	No of patients	Varna	No.of pts	Gandha	No of patients
Tanu retas	11	Vatapittaja	7	Shweta	13	Visraganda	13
Picchila retas	04	Vata kaphaja	8	Peeta	07	Nirganda	06
Ruksha retas	01	Kapha pittaja	5	—	—	Putiganda	01
Granthibhuta retas	02	-	-	-	-	-	-
Anyadhatu samasrita	01	-	-	—	—	-	-
Putipuya retas	01	-	-	-	-	-	-

Table no.3: Treatment given as per Ayurvedic Diagnosis and Contemporary diagnosis

Ayurvedic Diagnosis of Cases	Ayurvedic treatment -OAT Syndrome based on
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		Sperm Analysis	
Reto Dushti	Treatment modalities adopted	Condition	Treatment given
Vaataja	Ruksha- Amalaki (<i>Emblica officinalis</i>) ; Shatavari grita; Vidaryadi grita Amrutaprasha grita	Oligospermia < 30 million/ml	Shatavari(<i>Asperagus racemosa</i>), Mushali (), Sharkara(<i>Saccurum officinarum</i>), Ashvagandha (<i>Withanania somnifera</i>) Vidari kanda (<i>Pureria tuberosa</i>), Amalaki(<i>Emblica officinalis</i>), Masha () Mamsa rasa, Ghee, Milk,
Pittaja	Pittashamaka dravyas – Chanadana(<i>santalum album</i>), Sariva(<i>Hemedesmus indicus</i>), Amalaki (<i>Emblica officinalis</i>), Guduchi(<i>Tinospora cordifolia</i>)	Asthenozoospermia-motility less than 50%	Kapikacchu(<i>Mucuna Pruriens</i>) , Pippali(<i>piper longum</i>) , Shunti(<i>zingiber officinalae</i>) , Amalaki(<i>Emblica officinalis</i>) , Makaradvaja rasa.
Kaphaja	Palasha kshara , Saindahava, Pippali(<i>piper longum</i>), Shunti(<i>zingiber officinalae</i>), Shilajatu, Chandraprabha vati, Dadeema (<i>Punica granatum</i>) Ati picchila:-Triphala ,Lohabhasma ,Ashwagandha(<i>Withanania somnifera</i>) , Kapikacchu(<i>Mucuna Pruriens</i>), Kokilaksha(<i>Hygrocanthes Aspergaus</i>), Navayasa Loha	Teratozoospermia (>60% abnormal forms)	Aswagandha, kapikacchu, samudraphena, Amalaki, Guduchi, Trivanga bhasma, Rajata bhasma Chandrodaya, Poorna chandroday rasa
Pooti	Samudraphena	Azoospermia	Rajata. Makaradvaja, Pippali(<i>Piper longum</i>), Maricha(<i>Piper nigrum</i>), Shilajatu, Loha Bhasma, Haritaki(<i>Terminalia chebula</i>)
Puya	Shukra shodhaka dravyas , Katphala, kushta, Samudra phena. Chyavanaprasha, Sarivadyasava, Chandraprabha vati, Gokshuradi guggulu		

Table No.4: showing statistical interpretation of the parameters- (Before and after treatment)

Parameters	Mean + SEM	P value	Significantly different
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			<0.05?
Semen volume in ml	0.2250+0.2130	0.3040	No
Sperm count In millions	9.900+2.062	0.0001	Yes
Total motility%	13.75+2.783	<0.0001	Yes
RLP%	4.250+2.441	0.0978	No
SLP%	4.500+2.203	0.0553	No
NP%	3.750+2.016	0.0784	No
Immobile	13.25+2.863	0.0002	Yes
Total abnormality%	13.00+3.487	0.0014	Yes
Head%	11.75+2.839	0.0006	Yes
Mid piece%	0.800+2.755	0.7746	No
Tail%	1.500+1.817	0.4194	No
Headless%	2.250+1.174	0.0705	No

Semen Quantity: The Average semen Quantity of these 20 cases was between 0.5ml to 2ml before treatment. After proper Shodhana and Shukra Janaka / Vardhaka (drugs which purify/ increase the production of sperm) line of treatment there was marked increase in the production of semen which was significant (Mean+ SEM 0.2250+0.2130) with the P value 0.3040, which was significant at the confidence level of 95%.(Graph-1&Table no-4)

Sperm count: The study showed significant increase in the count after treatment the significant was (Mean + SEM 9.900+2.062) with the P value 0.0001 which was significant at 95%. Thus it shows that treatment was effective for increasing sperm count. (Graph-2&Table no-4)

Thus present retrospective study shows that the treatment were successive with respect to increase in sperm count, Sperm motility, Sperm morphology. Though there was clinically improvement in the conditions of the patients

Sperm Motility: The Total motility was found significant in the study (Mean +SEM 13.75+2.783) but the RLP (4.750+2.441), SLP (4.4500+2.023), NP (3.750+2.016) showed no significant results. But there was significant changes observed in the reduction of immobile sperm cells (13.15+2.863) with a P value 0.0002.(Graph-3&Table no-4)

Sperm Morphology: The total abnormality was significantly controlled (13.00+3.487) with a 'p' value 0.0014 significance at 95%. But there was no drastic changes saw in the midpiece abnormalities (0.800+ 2.755); tail abnormalities (1.500+ 1.817); headless (2.250+1.174) but the head deformities were significantly reduced with (11.75+2.839) with p value 0.0006 at the 95% confidence level (Graph-4&Table no-4)

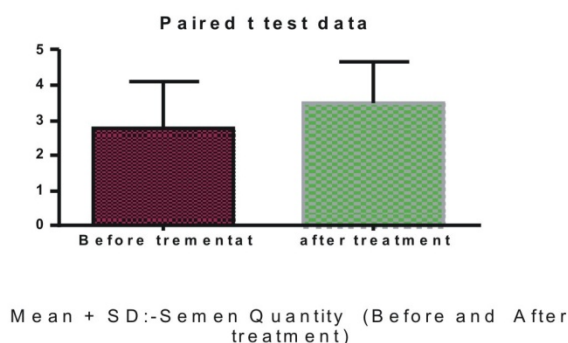
but the sperm quantity, RLP%, SLP%, NP%, Midpiece defects, tail and headless did not show any significant changes. Thus over all the study enlightens us about the importance and success

rate of vajikarana chikitsa when clinically applied based on pratipurusha siddhanta.

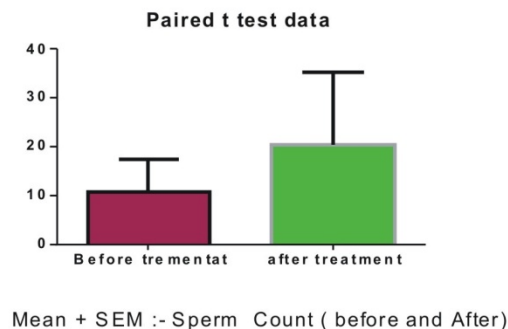
Discussion:

Life style and stress is the main etiological factor affecting the semen Quantity and Quality. OAT refers to the condition which

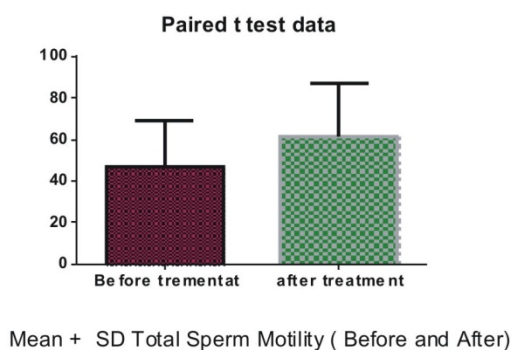
hampers both semen production and its normal morphology (Terato) and function (Asthen).⁽⁶⁾ When vataadi dosha gets vitiated by the foresaid nidaana's these settle into shukra dhatu and causes defects in Quantity, count, motility (RLP, SLP, NP Immobile), Morphology.



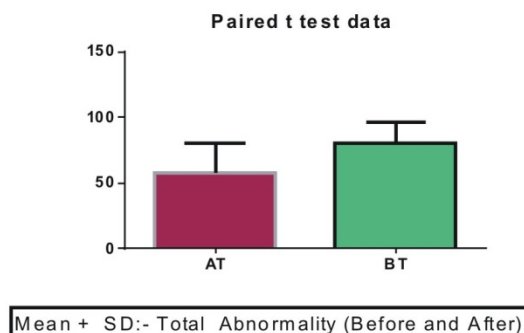
Graph no-1



Graph no-2



Graph no-3



Graph no-4

Vataja dushti leads to defects in quantity due to roukshata and kapha kshaya, also causing defects in motility- i.e. Decreased RLP, SLP and increased non progressive and immobile sperms. Pitta due to its Paaka guna when vitiated produces defects in quantity and morphological variations as – sperm count reduction (Oligo),

Vajikarana chikitsa: –

Is the specialized branch of Ayurveda mainly dealing with dushti's of shukra dhatu and its management.⁷ Though it deals mainly with shukra dhatu but the fundamental principles laid

altered morphology (Terato)- headless, headform deformities, midpiece deformities, tail deformities. When there is kapha kshaya it deforms the spermatogenesis as it causes depletion of rasa, leading to changes like alteration of pH, viscosity, consistency, and liquefaction time.

down are mainly based on Pratipurusha siddhanta i.e purusha, prakruti, dosha, dhatu, mala, dosha dooshya samurchana, kala, vaya, deha (Table no-3) etc. thus it is always not possible to fix the standard protocol for every condition, but the basic principle/ chikitsa sutra

will be the same. Thus drugs which are suitable and indicated in such conditions are utilized as per the patient condition. The main line of treatment in practice is – koshta shodhana by either Shodhanokta virechana karma or nitya virechana karma and vama (Koshta shodhana). Line of treatment in vajikarana is intended for shukra janana/vardhana karma, shukra shodhana karma, shukra virechana karma, shukra stambhana karma.

- Thus drugs like ashwagandha, shatavari, kapikacchu, mushali, sharkara, mamsa rasa, ghrita, ksheera, ikshu rasa, vidari, amalaki, masha, virechana and vrushya basti etc are known for Shukra janana/vardhana. These can be utilized in case of oligospermia, or decreased semen quantity- Vataja retodushti.
- The amalaki, kushta, katphala, ela, sariva, chandana, vidanga, bhallataka, etc are given to correct impairment in spermatogenesis-shukra shodhana action. Thus there will be

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production of healthy sperm both morphologically and physiologically (motility wise).

Conclusion:

The Aim of This retrospective study is not to show or set standard for the particular medicines used in these conditions. The idea being is to, establish and show the medical fraternity that there is wide range of treatment options available in the Vajikarana Chikitsa and it can be implemented in day to day practice based on the principle of Pratipurusha siddanta. Success rates are also promising and encouraging which lead us to step in further.

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