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Ayurvedic management of male and female infertility (associated with oligoasthenozoospermia and pcos) –A case report

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ABSTRACT: Infertility is defines as a failure to achieve a healthy pregnancy after 12 months or more of regular unprotected sexual intercourse. There are so many factors contribute to infertility .Male problems constitutes 30–40% and female issues constitutes 40–55% and both factors are responsible in about 10% of infertility cases. Remaining 10% is unexplained infertility [i]. ovulatory factors contribute almost 30–40% of female infertility. Among anovulatory causes of infertility, Poly Cystic Ovarian Syndrome (PCOS) plays a major role in female infertility issues. This is a case report of an infertile couple who had not been able to conceive since 2 yrs. The wife was diagnosed with PCOS and the male was diagnosed with oligoasthenozoospermia. In oligoasthenospermia both the count and motility of sperm is reduced and it is one of the most common finding in male infertility. The objective of the treatment included Ayurvedic management of PCOS, ensuring regular menstrual cycles and ovulation for the lady and for the male ayurvedic management of oligoasthenospermiathere by ensuring quality spermatozoa which will help to develop healthy pregnancy and successful childbirth. The outcome of the Ayurvedic intervention was the conception of the patient within 4 months of treatment and delivery of a healthy baby boy on 16/11/21.

KEYWORDS: Pcos. Oligoasthenozoospermia , infertility

INTRODUCTION:

Infertility, which seriously threatens human reproductive health, has become the third most difficult disease in the world, following only cardiovascular disease and cancer

Infertility is defined as a failure to achieve a healthy pregnancy after 12 months or more of regular unprotected sexual intercourse. Infertility cases are rising world wide.

There are so many factors contribute to infertility .Male problems constitutes 30–40% and female issues constitutes 40–55% and both factors are responsible in about 10% of infertility cases. Remaining 10% is unexplained infertility . ovulatory factors contribute almost 30–40% of female infertility. Among anovulatory causes of infertility, Poly Cystic Ovarian Syndrome (PCOS) plays a major role in female infertility issues. It is probably the most common and poorly defined endocrinological conditions in a woman. According to the World Health Organization (WHO) estimation revealed over 116 million women (3.4%) are affected by PCOS worldwide. PCOS is a lifespan disorder, which compromises other pathological conditions, including insulin resistance and hyperinsulinemia, obesity and metabolic disorders, all favoring, together with androgen exessand ultimately leading to menstrual irregularities and anovulation. Normal menstrual cycles range between 25 and 35 days due to variability in the length of the follicular phase in different women. In PCOS, 60–80% of patients present with menstrual irregularities with fewer than nine menstrual periods per year. Menstrual dysfunction in PCOS is attributed to multiple factors: neuroendocrine abnormalities, ovarian dysregulation of steroidogenesis and insulin resistance, each contributing at various levels to impact folliculogenesis and ovulation. Polycystic ovaries have been identified as being associated with recurrent miscarriage. The Clinical features of arthavakshayacan be considerd as pcos , as there is no direct reference for the same sings like Yathochita kala adarshana—oligomenorrhoea/amenorrhoea, Alpatha-hypomenorrhoea can be considered as signs of pcos and lakshyana of Nashtaarthava can also be considered under pcosthe Doshas which gets Avrutha may lead to arthavamnashyathi or athavanasham

In malesThe most common causes of male infertility are Oligospermia (reduced number of sperm), Asthenozoospermia (reduced motility of sperm), Necrozoospermia (reduced sperm vitality), Teratozospermia (abnormal sperm morphology) and a combination of these can also be seen. KsheenaShukra is included in one of the varieties of Ashtavidhashukradushti. When both Vata and Pitta Dosha are vitiated, the quality and quantity of the Shukra alters and resulting into

Shukradushti specially KsheenaShukra. Ayurvedic management of Shukradushti with Dhatuvriddhikara, Balakara, Shukrajanaka and Shukrapravartaka type of medicines which will increasing the sperm count and motility by correcting agni.

PATIENT INFORMATION

A young couple, lady of age 21 years and husband of age 28 years came to my op on 16/12/2020 lady is a hearing impaired , paramedical student complaining of irregular cycles and **primary infertility. The couple is** married since 2 years, since then they were planning for a baby.

PRESENTINGCOMPLAINTS:

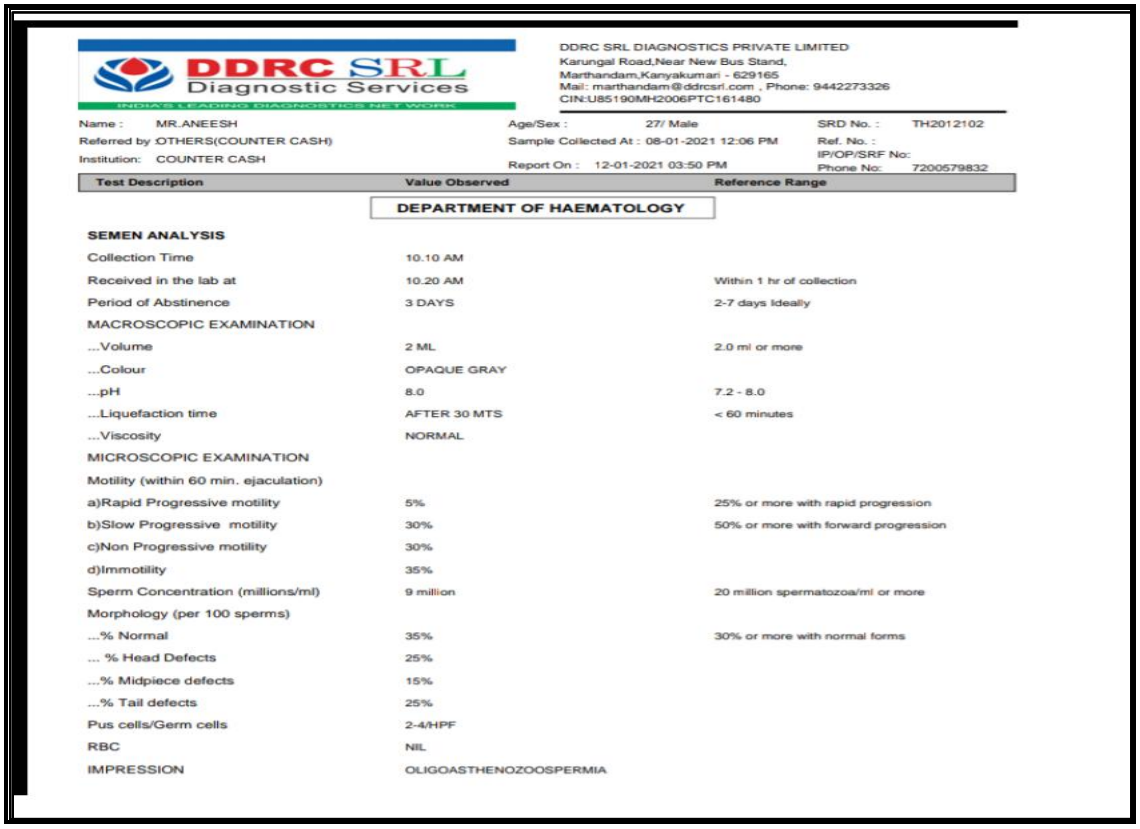
Irregular cycles (oligomenorrhoea 30-38 day cylces), with spotting on menstruation was her presenting complaint.

On Examination:

Hirsutism + , acanthosis nigricans +, moderate built (sudden increase of 4 kg after marriage) acne ++, darkening of skin on underarms.

DIAGNOSTIC ASSESSMENT

Semen analysis was done as a part of routine evaluation and USG was evaluated for the lady .It was observed that the male was having oligoasthenozoospermiaie the sperm concentration was 9 million and the progressive motility was 5 % only. and the lady was having pcos and the ovarian volume was increased 10.3cc on rt side and 10.1 cc on left side.as per the ASRM/ESHRE Consensus Meeting On PCOS Held In Rotterdam in 2003 criteria (3 /3 criteria is present) and the subject is having phenotype A of pcosiehyperandrogenism (HA) + ovulatory dysfunction (OD) + polycystic ovarian morphology (PCOM) on USG.



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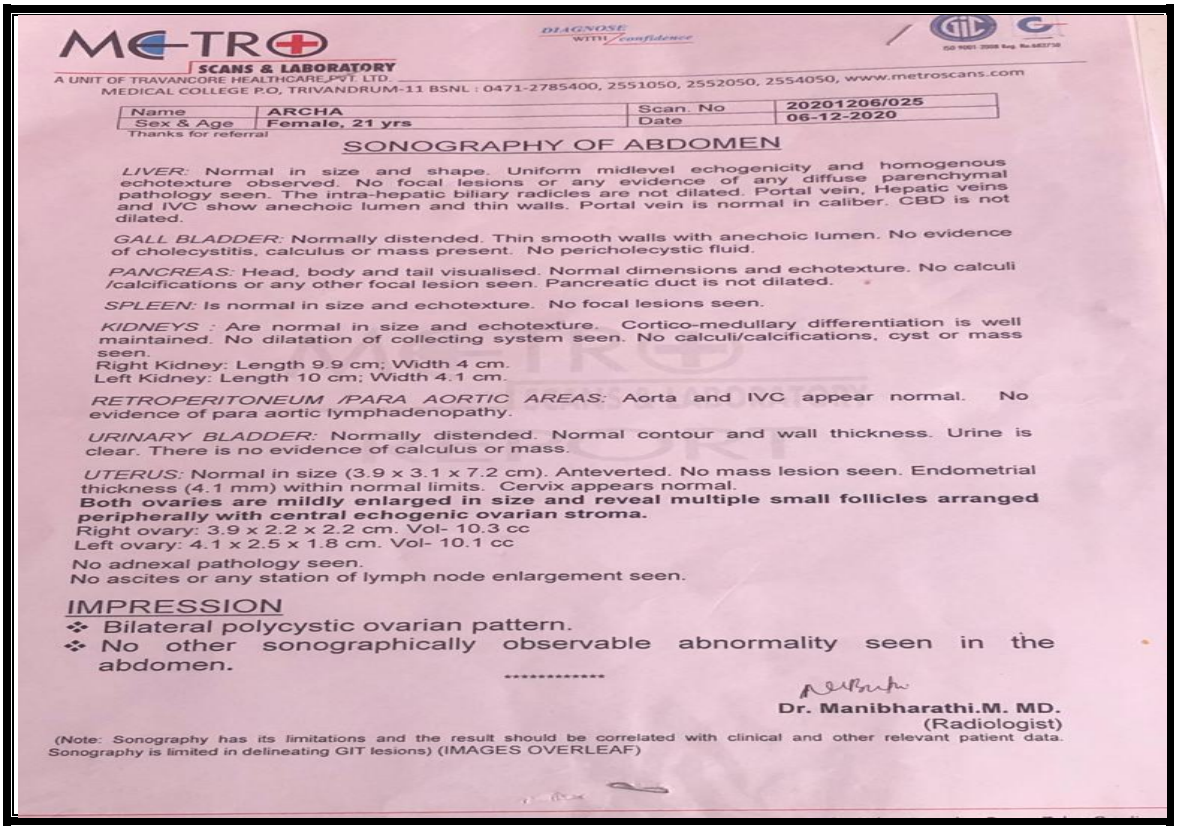
Name : MR.ANEESH
Referred by :OTHERS(COUNTER CASH)
Institution: COUNTER CASH

Age/Sex : 27/ Male
Sample Collected At : 08-01-2021 12:06 PM
Report On : 12-01-2021 03:50 PM

SRD No. : TH2012102
Ref. No. :
IP/OP/SRF No:
Phone No: 7200579832

Test Description	Value Observed	Reference Range
DEPARTMENT OF HAEMATOLOGY		
SEMEN ANALYSIS		
Collection Time	10.10 AM	
Received in the lab at	10.20 AM	Within 1 hr of collection
Period of Abstinence	3 DAYS	2-7 days Ideally
MACROSCOPIC EXAMINATION		
...Volume	2 ML	2.0 ml or more
...Colour	OPAQUE GRAY	
...pH	8.0	7.2 - 8.0
...Liquefaction time	AFTER 30 MTS	< 60 minutes
...Viscosity	NORMAL	
MICROSCOPIC EXAMINATION		
Motility (within 60 min. ejaculation)		
a)Rapid Progressive motility	5%	25% or more with rapid progression
b)Slow Progressive motility	30%	50% or more with forward progression
c)Non Progressive motility	30%	
d)Immotility	35%	
Sperm Concentration (millions/ml)	9 million	20 million spermatozoa/ml or more
Morphology (per 100 sperms)		
...% Normal	35%	30% or more with normal forms
... % Head Defects	25%	
...% Midpiece defects	15%	
...% Tail defects	25%	
Pus cells/Germ cells	2-4/HPF	
RBC	NIL	
IMPRESSION	OLIGOASTHENOZOOSPERMIA	



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Name	ARCHA	Scan. No	20201206/025
Sex & Age	Female, 21 yrs	Date	06-12-2020

Thanks for referral

SONOGRAPHY OF ABDOMEN

LIVER: Normal in size and shape. Uniform midlevel echogenicity and homogenous echotexture observed. No focal lesions or any evidence of any diffuse parenchymal pathology seen. The intra-hepatic biliary radicles are not dilated. Portal vein, Hepatic veins and IVC show anechoic lumen and thin walls. Portal vein is normal in caliber. CBD is not dilated.

GALL BLADDER: Normally distended. Thin smooth walls with anechoic lumen. No evidence of cholecystitis, calculus or mass present. No pericholecystic fluid.

PANCREAS: Head, body and tail visualised. Normal dimensions and echotexture. No calculi /calcifications or any other focal lesion seen. Pancreatic duct is not dilated.

SPLEEN: Is normal in size and echotexture. No focal lesions seen.

KIDNEYS : Are normal in size and echotexture. Cortico-medullary differentiation is well maintained. No dilatation of collecting system seen. No calculi/calcifications, cyst or mass seen.
Right Kidney: Length 9.9 cm; Width 4 cm.
Left Kidney: Length 10 cm; Width 4.1 cm.

RETROPERITONEUM /PARA AORTIC AREAS: Aorta and IVC appear normal. No evidence of para aortic lymphadenopathy.

URINARY BLADDER: Normally distended. Normal contour and wall thickness. Urine is clear. There is no evidence of calculus or mass.

UTERUS: Normal in size (3.9 x 3.1 x 7.2 cm). Anteverted. No mass lesion seen. Endometrial thickness (4.1 mm) within normal limits. Cervix appears normal.
Both ovaries are mildly enlarged in size and reveal multiple small follicles arranged peripherally with central echogenic ovarian stroma.
Right ovary: 3.9 x 2.2 x 2.2 cm. Vol- 10.3 cc
Left ovary: 4.1 x 2.5 x 1.8 cm. Vol- 10.1 cc

No adnexal pathology seen.
No ascites or any station of lymph node enlargement seen.

IMPRESSION

- Bilateral polycystic ovarian pattern.
- No other sonographically observable abnormality seen in the abdomen.

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Dr. Manibharathi.M. MD.
(Radiologist)

(Note: Sonography has its limitations and the result should be correlated with clinical and other relevant patient data. Sonography is limited in delineating GIT lesions) (IMAGES OVERLEAF)

THERAPEUTIC INTERVENTION

Table 1 timeline

Visit	lmp	Medicines for the lady
1st visit 6/12/20	28th nov – 2 days mild spotting	Saptasaramkashyam 4tsp -0-4tsp (1/4th cup of warm water Hinguvachadi tab 1-0-1 along with kashya Sukumaramghritam(½ tsp)emty stomach Kumaryasavam 30 ml -0-30ml
2nd online consultation	Jan 4 th – 3 day mild – moderate bleeding	continue the same Satapuspasookshmachoornam with tilatailam(1tsp) at 5pm
3rd visit 8/2/21	Jan 28th – 5 day moderate bleeding, felt ovulatory pain on lt side on day 15	Saptasaramkashyam Kalynanakamkashyam as toyam(1tsp powder in 1L of water Indukanthamghritam(1tsp empty stomach) Jeerakaristam 30ml -0-30ml after food
4th visit 16/3/21	Feb 28th – 5 day moderate bleeding, felt ovulatory pain on rt side on day 14	Saptasaramkashyam4tsp -0-4tsp Hinguvachadi1-0-1 Dadimadighritam (1tsp in empty stomach) Saribadyasavam ,kalyanakakashyamchoornam
	March 30th UPT + ve	
	Delivered a healthy baby boy on 16/11/21	Term baby of wt2.69 kg (Apagar score 9/9/9 at 1/5/10 min)

(Source:Primary Data)

For the male

Date	Medicines
Visit 1 (6/12/2020)	Avipathichoornam 3gm at night with honey for 1 week Guluchyadikashyahoornam astoyam Brihathyadikashyam 4tsp -0- 4tsp with ¼ th cup of warm water
Visit 2 Online consultation	Chiravilwadikashyam 3tsp -0- 3tsp (1/4th cup of warm water) Kalyanagulam(1tsp at night) Maharasnadikashyam as toyam
Visit 3(8/2/2021)	Nishakhatakadikashyam astoyam Chiravilwadikashyam 4tsp -=0=4 tps with ¼ th cup of warm water Abhyaristam30ml -0-30ml + dhanwantharam tab 1-0-1 Count plus granules Vaishwanarachoornam 1tsp with warm water

(Source:Primary Data)

FOLLOW UP AND OUTCOME

The lady's cycle got regular and the amount of bleeding improved. The couple got UPT + ve on 30th march and deliverd a healthy baby boyon . during her pregnancy she become gestational diabetic and took nishakhatakadikashyam as toyam and her diabetic was under control .

DISCUSSION

POCS

Sampraptighatakaof female -Dosha-VataKaphaDushya-Rasa, Rakta, AartavaStrotas-Rasavaha, Aartavavaha Agni-Jatharagnimandya, Strotodushti type-Sang (Obstructive) Marga-Abhyantaramarga Various chromosomal and genetic abnormality comes under this heading. Its genetic origins are likely polygenic and/or multifactorial. This is complex multigenic disorder that results from the interaction between multiple genetic and environmental factors. A high prevalence of PCOS or its features among first degree relatives is suggestive of genetic influences. The mother of the subject is also having a history of PCOS (now she attained menopause) and the sudden increase in weight after marriage triggered the epigenetic mechanism of pcos. and she is also having a reduced appetite , which may lead to jataragnimandhya and which inturn leads to the athavakshaya and ultimately leads to vandhyatwa. So the medicines like saptasaramkashyam ,hinguvachadi tab corrects the agni and also it improves the proper blood supply to the uterus and

removes the avarana by kapha dosha there by increases the endometrial thickness and result in proper bleeding . the medicines like kumaryasava improves the hormone level and it is proper arthavapravarthaka action is there. Kalyanakamkashyam was added because the lady was having very much stress as a result of the infertility issues and also she was having exams at that time as she is a paramedical student. After correcting the agni and all satapushpachoornam with tilatailam was added to the medicine list inorder to improve the ovarian function as satapushpachoornam with tilataila which improves the pitta and is having a wonderful effect on the HPO axis in regulating the ovulation.

Oligoasthenozoospermia

Sampraptighataka of male -Dosha-pitta KaphaDushya-Rasa, Rakta, meda ,srothas -Rasavaha, medovaha and sukravaha Agni-Jatharagnimandya, Strotodushti type-Sang (Obstructive) Marga-Abhyantaramarga the male was having an angimandhya and he was was also having elevated liver function profile and on previous USG (report was not available) grade 1 fatty liver was there. So main kapha pitta samana line of management was adopted. Guluchyadikashyam, avipathichoornam and brihathyadikashyam was given to go for a pitta samana and later kalyanagulam was opted to do a Nithya virechanainorder to do a srothosodhana. And the subject was also given nishakatakadikashya as premehaharaoushadha .laterchiravilwadi is opted to correct the dhathuagni and correct the uttarotharadhathu's . count plus granules will also support the sperm production. Vaiswanarachoorna will support the proper functioning of the samana and apanavayu which will help in the proper spermatogenesis.

CONCLUSION

From this case study Polycystic Ovary syndrome (PCOS) and oligoasthenozoospermia can be managed by Ayurveda samana line of treatment. The preoper function of arthava and sukravahasrothas can be restored with proper ayurvedic medicines. The lady's cycle got regular with in 2 months of treatment and the amount of bleeding was also improved and the couple got UPT + ve on 30th march and delivered a healthy baby boyon 16/11/21 of wt 2.69 lg .

Informed consent

Consent was obtained from the couple for the purpose of publication of their clinical details

S. DeshpandeyP, S. GuptaA,Causes and prevalence of factors causing infertility in a public health activity, J Hum Reprod Sci, 12 (4) (2019), pp. 287-293

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