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ABSTRACT:

Varicocele is important etiological factor in male infertility. About 15 to 20% of all males are frequently diagnosed as Testicular varicocele at age 15 to 30 year. Recent studies as shown that varicocele affect the sperm production due to increased scrotal temperature and reduction in supply of oxygenated blood and nutrients to the site of sperm production. Varicocele is dilatation and tortuosity of the testicular veins caused by weakness of valves leading venous flow insufficiency, preventing blood flow back to general circulation. In Ayurveda varicocele can be co-relate with *Sira Granthi*. In pathogenesis of *Sira Granthi* *Vata* and *Pitta Dosha* are predominant *Rasa-Rakta* are *Dushas*. *Raktamokshana* is important measure for purification of impure blood. *Jalaukavacharan* is easy and very safest method of *Raktamokshana*. In this view *Jalaukavacharan* is planned to study in varicocele to assess its effect. In present case *Jalaukavacharan* shown hopeful result.

Key Words: *Jalaukavacharana*, Varicocele, Oligoasthenospermia, *Sira Granthi*.

INTRODUCTION: Fertility is an existential necessity and as such has assumed overwhelming importance from time immemorial; on the other hand infertility severely affects the couples psychologically, sexually and socially. The quantity and quality of ejaculate are decreasing day by day in which testicular varicocele is one of the cause.

Varicocele is an abnormal enlargement of the pampiniform venous plexus in the scrotum. This plexus of vein drains the testicles. The testicular blood vessels originate in the abdomen and course down through inguinal canal as a part of spermatic cord on their way to the testis. Upward flow of blood in the veins is ensured by small valves that prevent back flow.

Left side varicocele is most common, because of pressure loaded by rectum over left vein. The right gonadal vein drains in to the inferior vena cava, while the left gonadal vein drains in to the left renal vein at right angle, this may be

the reason of higher incidence of varicocele on left side.

Scrotal contents are kept 2 to 4 ° C below the temperature than abdominal cavity. Anatomical features of scrotum and testis provides the regulation of low testicular temperature. The scrotal skin lacks subcutaneous fat and is very richly endowed with sweat glands. The contraction and relaxation of the scrotal musculature and dartas muscles alter the thickness of scrotum to regulate low temperature in scrotal cavity.

The testicular artery is a convoluted structure in the form of a cone, the base of which rests on the testes. The pampiniform plexus which is formed by a network of veins as they leave the posterior border of the testes and pass up the spermatic cord surrounds the convoluted the testicular artery serves as a thermoregulatory mechanism. The anatomic relationship provides an effective counter current mechanism by which arterial blood entering the testes is cooled

by the venous close to the testes tend to increase direct loss of heat from the testes¹.

One of the main functions of the plexus is to lower the temperature of testicles; Varicocele causes the function to be lost hence the most common complication of untreated varicocele is higher temperature of the testis². Resulting increase in testis size, degeneration of cells in the seminiferous epithelium, decrease in sperm output, impaired sperm quality with reduction in the percentage of viable, motile and morphological spermatozoa.

Varicocelectomy, the surgical correction of varicocele is common treatment but it is invasive and possible complication includes hematoma, hydrocele, infection and injury to scrotal tissue. An alternative treatment to surgery is embolization², a minimally invasive treatment but it is costly.

In Ayurveda varicocele is correlate with *Sira Granthi*, Here vitiated *Vata Dosha* compress the network of veins causing dilatation of vein. Long time standing blood increase the temperature of local part also it contents waste toxic material which is produced by cell metabolism. As *Vrushan* and *Shukravaha srotus* is sensitive to temperature³. This may impair the normal physiology of testis of producing healthy spermatozoa.

Raktamokshana is very effective measure in the management of *Sira Granthi*⁴, in that *Jalaukavacharan* is noninvasive and cost effective easy method of treatment effect of *Jalaukavacharan* is local that is one *Hast and Avaghad* (deep seated)

Jalauka sucks vitiated blood and reduce local temperature. Saliva of *Jalauka* contains hirudin, anticoagulant proteins and histamine like substances which are helpful for restrict the pathophysiology of varicocele.

CASE REPORT: 30 year old male patient of primary infertility having *Vatapitta Prakruti* visited in O.P.D. of S.S.N. Jain Ayurveda hospital, Solapur on 4.6.2013. He is married 4 year back,

couple was not used any contraceptive since marriage. Patient had diagnosed as Oligoasthenospermia 1.5 year back. Infertility and heaviness of scrotum are the main complaints of patient.

LOCAL EXAMINATION: Patient having normal body proportion. There is reduced pubic hairs and reduced scrotal skin pigmentation. In Scrotal contents both testis having soft consistency and it measured about 16 ml both side. Both epididymis are normal. In spermatic cord examination there is bilateral varicocele.

BRIEF HISTORY: Since one and half year patient had taking treatment from well known gynecologist for infertility. He was taking Cap Lineator 1 OD and Tab clomipure 25mg 1 OD. After a treatment of one year there is no change in semen parameters, so physician advice him scrotal sonography, in which it is diagnosed as bilateral grade 3 varicocele. As modern doctor suggested him surgery, he came to S. S. N. Jain Ayurveda hospital, with previous report of scrotal sonography and semen analysis.

INVESTIGATION: Semen analysis was done before starting the treatment and after treatment.

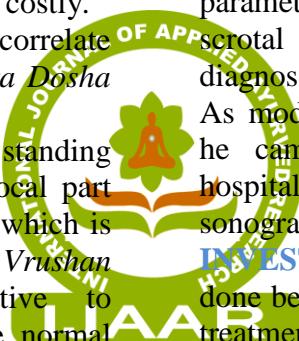
STUDY CENTER: S. S. N. Jain Ayurveda hospital, Solapur.

Patient age: 30 year, **Gender:** Male, **Religion:** Muslim, **Diet:** Mixed

TREATMENT PLAN: In this case *Jalaukavacharan* was done once weekly for 10 settings. *Jalauka* are applied over inguinal region just lateral to pubic symphysis on both side. One *Jalauka* was applied on each side for single setting.

During this period patient was given *Kaishor guggulu* 250mg 2tabs BID, *Chandanasava* 2 tsf TDS, *Panchtikta Ghrita* 1 tsf BID and *Trivrut churana* 2 gm HS orally for 3 months.

OBSERVATION AND RESULT: Patient is of *Vatapitta pradhan Prakruti*, He is working as fitter in factory and he stands 6 hours daily. He also having night shift one month per 3 month. He was having history of constipation since 5



years. Symptom heaviness of scrotum is cured after two setting of

Jalaukavacharan.

Semen analysis	Before treatment	After treatment
Semen volume	2 ml	2 ml
Sperm count	< 5 millions/ml	42 millions/ml
Active motile	10%	30%
Sluggish	10%	10%
Dead	80%	60%
Abnormal Morphology	30%	10%
Immature cells	Few	Nil
Pus cells	0 to1 /hpf	Nil

After treatment there is 8times increase in sperm count. Active motile sperm are increased by 20%. After treatment there is decrease in immature cells and pus cells. Abnormal morphology also reduced by 20%.

DISCUSSION: *Jalauka* is very much beneficial in *Dushita Rakta Vikara* (Blood related disorders), it sucks vitiated blood from selected part of body. Acharya described *Jalaukavacharan* as *Anushastra* (parasurgical procedure). It is much safer and less complicated natural procedure.

As temperature of testis is below the body temperature in varicocele it may increase. *Ushna Guna* is of *Pitta Dosha* and *Pitta* having *Ashrayashrayi Sambandha* with *Rakta*⁵. *Jalauka* having specific action on *Pitta Dosha* because of it is *Sheeta* in nature, so automatically *Jalaukavacharan* will reduces scrotal temperature and expels waste material which is harmful for spermatogenesis. Pampiniform plexus which surrounds

testicular arteries for regulating low temperature in oxygenated blood, by this action there may increase in sperm count and motility. *Jalaukavacharan* is purification therapy; it expels vitiated *Rakta* and *Dosha* there by does *Shukravaha Sroto Shuddhi* and intensifies *Shukra Dhatwagni*, there may be reduction in abnormal morphology, immature cells and pus cells.

Jalaukava attach the skin of the patient and start sucking blood, saliva of *Jalauka* enters the punctured site along with enzymes and other chemical

compounds. This secretion of *Jalauka* spreads at local area.

Enzymes and chemical compounds like hirudin, colin and destabilase act as anti coagulating agents decrease viscosity of blood and helps to reach testis for proper spermatogenesis. Carboxypeptidaes A inhibitor, histamine like substances improves blood circulation and reduces congestion⁶. Acetylcholine does vasodilatation and increases the flow of blood to the site. Hyaluronidase increase interstitial viscosity, it may helpful to reach nutrients to each cells of seminiferous tubules. Anesthetic substances might reduce heaviness of scrotum. Bdellins and eglins are anti inflammatory action there by it may prevent production of infectious products in blood of pampiniform plexus.

CONCLUSION: *Jalaukavacharan* is effective therapy in varicocele it gives encouraging results in oligoasthenospermia. As compare to costly surgery it is affordable, noninvasive and safe treatment for varicocele. *Jaluakavachara* can be considering as microsurgery of Ayurveda.

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