

CRITICAL REVIEW ON SHUKRA AND SHUKRAVAHA SROTHO MOOLAT S Sajini¹, Midhu Parvathy¹, Anu Uthara Pious¹, Nisha Kumari²¹Post Graduate Scholar, Dept of RogaNidana, Sri Dharmasthala Manjunatheshwara College of Ayurveda, Hassan, Karnataka, India² Associate professor, Dept of RogaNidana, SDM College of Ayurveda, Hassan, Karnataka, India**ABSTRACT**

Shukra (semen) being one among the *saptha dhatus* (seven body entities) and lastly formed *dhatu* is considered to be vital. Its main function is *Garbotpadana*(reproduction). The *srotas* (channels) which carries *shukra* can be considered to be *sukravaha srotas* and its *moola sthaana* (site of origin) is told as ‘*vrushana*’ (testis) and ‘*shepha*’ (penis) by *Acharya Charaka* and as ‘*sthana*’ (breast) and ‘*vrushana*’ by *Acharya Sushruta*. As *vrushana* and *shepha* act as the site of formation and path of ejaculation respectively, can be considered as *moola sthaana* with respect to *sthula shukra* (semen). And in case of *sthana*, it is an organ which is highly sensitive to its hormonal environment and can provoke the sexual act and ultimately its effect will be there on the secretion of *shukra* and by this, the role of *sookshma shukra* (invisible form of *shukra*) becomes evident, where the function of *sukshma shukra* can be understood by hormonal functions

Keywords: *Garbotpadana, Sukravaha Srotas, Vrushana, Shepha, Sthana*

INTRODUCTION

Dhatus are responsible for the *dharana*¹ (sustenance) of *shareera* and *Shukra* is one among the *saptha dhatus*. *Shukra* is the last *dhatu* which is formed from *prasada bhaga* (essence) of *majja dhatu*² and also considered to be the essence of all the *dhatu* and hence it is said to be one among the *dashapranayatana*³ (vitals of the body). One of the main *karma* (function) of *Shukra* is *Gharbotpadana*⁴ (reproduction) and thus it is known with synonyms like *retas*, *pumbija*, *veerya* etc and other functions are it provides *dhairya* (courage), *chyavana* (ejaculation), *preeti* (lust), *dehabala* (strength of body), *harsha* (pleasure)⁵. *Shukradhara kala* is considered to be *sarvashareera vyapi*⁶ (spread all over the body),

which tells about the *sukshma shukra*. So the *Shukra* can be classified as *sthoola shukra* and *sukshma shukra*. The *srothas* that carries *shukra* is considered as *shukravaha srotas*. *Acharya Sushruta* explains *sthana* and *vrushana*⁷ as *shukravaha sroto moola* and *Acharya Charaka* explains *vrushana* and *shepha*⁸ as the *moola sthaana* (site of origin) of *shukravaha srothas*.

Aims and Objectives:

To understand *sthoola shukra* and *sookshma shukra*, and its various functions in the body To critically analyze the reason behind considering, *Vrushana*, *shepha* and *sthana* as *moola sthaana* of *shukravaha srothas* with respect to the embryonic development.

Materials and Methods: Only textual materials are consulted for present study and from which the relevant references have been collected. The principle Ayurvedic texts referred in this study are *Charaka Samhita*, *Sushruta Samhita*, *Sarangadhara Samhita* and available commentaries on them and modern books such as Human Embryology and related websites have also been searched

Shukravaha sroto mula

Moola sthaana are the *prabhava sthana's*⁹, i.e. the particular *srotases* will develop from its *moola sthaana* and few opine that the *moola sthaana's* as the governing sites of that particular *srotas* for the proper maintenance of the *dhatu*s after the formation of them or, it can also be considered that the main effect over *srotas* is first observed in *moola sthaana*

Here, *Vrushana* is explained as 'veeryavahi siraadharou'¹⁰, i.e. the *ashraya sthaana* for the *sira's* which carry *veerya* or *shukra*. *Vrushana* can be taken as testes, which are paired oval glands suspended in scrotum by spermatic cord. The next *moola sthaana* is *shepha*, which act as the path through which urine and sperm comes out in males and it can be considered as penis which is an organ of copulation and urination. In embryonic development, the gonads either testes in males or ovaries in female contain respective primordial germ cells and these germ cells develop from undifferentiated genital ridge during 5th week and the gonadal differentiation occurs in 7th week of embryonic life and similarly the sex ducts remain undifferentiated in early part of development. Both gonads and sex ducts becomes apparent during 3rd month of foetal life. Sex differentiation happens when the primordial germ cells originate in human embryos from

endoderm of yolk sac and allantois. These cells migrate and reach genital ridge bilaterally in the later part of 5th week, usually gonads are indifferent/ ambisexual & consists of outer cortex & inner medulla. When germ cells appear in medulla of indifferent gonad, medulla differentiate to form testes (7th wk) and cortex regress, resulting in the formation of spermatogonia. On the other hand, appearance of germ cells in the cortex induces the development of ovary in 8th or 9th week and germ cells are transformed to oogonia. After differentiation of gonads, the foetal testis secretes two hormones such as protein hormone and Anti mullerian hormone (AMH) and these are responsible for the phenotypic male development. The steroid hormones secreted by Leydig's cells of foetal testes are testosterone and dihydrotestosterone (DHT), where the testosterone does the retention of mesonephric duct (primitive sex duct) and promoting its differentiation into duct system of testes and the DHT is responsible for male pattern of development before birth i.e. enlargement of male sex organs and expression of male secondary sex characteristics. Spermatogonia develop from primordial germ cells that arise from yolk sac and enter testes during 5th week of development. Once spermatozoon is formed it is released in seminiferous tubules and the fluid for the sperm transport is produced by sertoli cells present in seminiferous tubules, the fluid pressure pushes sperm along the lumen of seminiferous tubules which reaches the rete testis via straight tubules and from there to coiled efferent ducts in epididymis, then vas deferens reaching to the ejaculatory duct and through urethra is ejaculated out¹¹. From this it is clear about the site of formation and path of ejaculation of *shukra* hence the *vrushana*

and *shepha* is considered as *moola sthaana* with respect to the *sthoala shukra*.

Sthana (breast) is also considered as *moola sthaana* by *Acharya Sushruta*, the appropriate reason for considering *sthana* as *moola sthaana* has not been explained. So the probable reason may be the organs concerned with the function of *santhaanotpatti* (reproduction), either in males and females should be considered under *sukravaha srotas*, as there is an opinion that the *sthana* in both the sexes have main role in the sexual act as sensitive areas, where these areas can provoke the sexual act and ultimately its effect will be there on the secretion of *shukra*¹² and during early stages of embryonic development they are independent of sex steroid hormones and then the presence of testosterone hormone and its binding to mesodermal receptors helps in normal involution of male mammary gland. But, in the later part the mammary gland become extremely responsive to their hormonal environment. For example, in testicular feminization syndrome, there will be circulating testosterone but the testosterone receptors will be absent resulting in development of female phenotype including the breast development. Here comes the role of *sukshma shukra*.

DISCUSSION

The word *Shukra* cannot be taken or considered as mere semen or the *Murtha rupa* of *shukra* which is ejaculated during the sexual act either from male or female, but is the factor which is present in each and every cell body in the form of *sukshma shukra* and the *shukradarakala* is believed to be *sarvashareera vyapi* which again emphasizes over the presence of *sukshma shukra* all over the body. *Sarvashareera gata sukra*

can be understood by the action of various hormones and involvement of multiple systems. Both male and female hormones are present in both the sexes' alike, but in vastly different amounts. One of the *karma* of *shukra* is, it provides *bala* to the *shareera*, which mainly indicates as the *karma* of *sukshma shukra* and hence disturbance or abnormal functioning of it will hamper the healthy state of body. Aging is related to loss of sex hormones in both male and female, estrogen as a pro-hormone; has got main function in growth and development, stimulating the fat cells to grow and is a key component in reproduction. Progesterone with estrogen works to strengthen bones, sustain cholesterol levels, support libido and the Testosterone stimulates the development and maintenance of male secondary characters, haemopoiesis, growth of healthy muscle mass, supports libido- bone density- memory and well being. Low level of prednisolone leads to anxiety, mood imbalances and poor cognitive functions. The hormone DHEA (dehydroepiandrosterone) helps in stimulating protein synthesis, decrease visceral fat, support bone health and maintain cardiovascular health. The sex hormones such as pheromones, responsible for close proximity smells also play a big role in sociosexual behaviors'. Endorphins are neurotransmitters and when the body gets stimuli, hypothalamus calls for endorphins and these have the ability to make feel good. Other than hormones, hypothalamus and limbic system also plays important role in producing external manifestation of emotions, which has got endocrine components such as adrenaline secretion, autonomic components such as increased heart rate, increased blood pressure, piloerection, salivation and dilation of pupil etc. So the role of *sukshma shukra*

can be understood in terms of function of various hormones. As *ghrita* (ghee) is hidden in milk, similarly *sukshma shukra* is hidden in the body which shows its presence by the expulsion of *sthula shukra* by sexual drives.

CONCLUSION

Shukra can be classified as *sthula* and *sukshma shukra* and is present in both sexes. Where, *sthula shukra* can be considered as that, which is ejaculated out through *shepha* during the sexual act and is responsible for the reproduction and in female it can be considered as mucus secretions by the glands of skene through urethral orifice in response to sexual drive, but it is not capable of reproduction and *sukshma shukra* is present all over the body which can be understood by various hormonal functions, is also considered as the *bala* and its function is almost same in both sexes. Among the *moola sthaanas* mentioned, the *vrishana*'s are very clear about how they have role in *shukravaha srotas* both structurally and functionally and the *shepha* act as the path through which the *sthula shukra* formed in *vrishana* is ejaculated out. *Sthana* is an organ which highly responds to sex hormones in both the sexes and here comes the role of *sukshma shukra*, where the Hypothalamo-Pituitary-Gonadal axis gets stimulated due to hormones and in turn leads to ejaculation of *sthula shukra*.

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