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A REVIEW ON KOKILAKSHA BEEJA CHURNA IN VRISHYA KARMA

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ABSTRACT

Ayurveda, the ancient science of life, has given due importance to the life and life span of humanity. The first and foremost aspect of a human being is getting birth and giving birth to the next generation. In the current era, infertility is one of the trending issues faced by married couples, as we can see more and more cases are being reported in day-to-day clinical practices. Infertility is the inability to conceive after one year of unprotected regular sexual intercourse. Of all infertility cases, approximately 40-50% is due to “male factor” infertility, and as many as 2% of all men will exhibit suboptimal semen parameters. Oligospermia is the leading cause highlighted than any other conditions elicited in this regard. Many herbal drugs are explained in Ayurveda for the enhancement of sukra dhatu. Ayurveda is classified into eight divisions, also called Ashtanga Ayurveda. Vajeekarana is one of the important branch amongst Ashtanga Ayurveda that is concerned with all types of physical, and psychological sexual problems like impotence, libido, poor erection and early ejaculation in the males as well as sterility and frigidity in the females. The Vajikarana Drugs help in Giving strength and vigour to the Dhatu thus Strengthening the reproductive potentiality.

KEYWORDS: Oligospermia, shukrakshaya, vajikarana.

INTRODUCTION

Reproduction is one of the basic characteristics of living being, which ensures continued existence of the species on earth. In male, reproduction is the prime function of 'Shukra' while in female 'Artava' is responsible for fertilization. Shukra is present in entire body and is considered as the Sara of all other Dhatu. So it is advised practicing healthy sexual life, consuming healthy food and leading a healthy lifestyle to protect Shukra Dhatu. Shukra Dhatu carry out systemic functions like Dhairya, Preeti, Deha Bala etc and functions related to sexual act like Harsha and Chyavan.[1]

Shukra Kshaya can be broadly classified into primary (Alparetas) and secondary (Acquired). Alpa Retas is the condition of low level of Shukra since birth or below the age of 25 years as described by Acharya Dalhana(Dal. On Su.Su.1/7).[2] This condition is usually seen in Primary hypogonadism of male due to chromosomal or congenital causes. Secondary or acquired type of Shukrakshaya is further divided into Physiological (Vishushka) and Pathological (Ksheena).Vishushka Retas is the condition of extremely low levels of Shukra or the depletion of Shukra that occurs physiologically in old age i.e., after 70 years of age (Dal.on Su.Su.1/7). Ksheena retas condition is also associated with moderately low or decreased level of Shukra Dhatu. But the characteristic feature in this condition is that the patient is in the middle age and the conditions are produced by certain etiological factors.

Oligozoospermia is a condition of suboptimal concentration of spermatozoa in the ejaculated semen to ensure successful fertilization of an ovum. Oligozoospermia is also known as Oligospermia. In 2010 WHO has announced sperm criteria and stated a lower reference point less than 15 million sperm per ml is termed as Oligospermia. But According to International Classification of Disease categorization (it comes under ICD 10 CM code N46.1) the sperm concentration less than 20 million per ml cause Oligospermia which is said to be the current and unique referral standard for assessment.[3]

Physiology of Male Gametogenesis[4]

SPERMATOGENESIS

The process of differentiation of a spermatogonium into a spermatid is known as spermatogenesis. It is a complex, temporal event whereby primitive, totipotent stem cells divide to either renew themselves or produce daughter cells that become specialized testicular spermatozoa over a span of weeks.

Spermatogenesis involves both mitotic and meiotic proliferation.

Spermatocytogenesis

The purpose of spermatogenesis is to produce genetic material necessary for the replication of the species through mitosis andmeiosis.

Spermatocytogenesis takes place in the basal compartment. Primary spermatocytes enter the first meiotic division to form secondary spermatocytes. Prophase of the first meiotic divisionis very long, and the primary spermatocyte has the longest lifespan.

Secondary spermatocytes undergo the second meiticdivision to produce spermatids. Secondary spermatocytes are short-lived (1.1 to 1.7 days).

The meiotic phase involves primary spermatocytes until spermatids are formed; during this process, chromosome pairing, crossover, and genetic exchange is accomplished until a new genome is determined. In turn, a postmeiotic phase involving spermatids all the way up to spermatozoa develops, ending in the formation of the specialized cell. The process by which spermatidsbecome mature spermatozoa can take several weeks ands one of the most elaborate differentiation events of any mammalian cell. This process requires the synthesis of hundreds of new proteins and the assembly of unique organelles. Within the preview of the Sertoli cell, several events occur during this differentiation of spermatid to sperm.

Mitosis

Mitosis involves proliferation and maintenance of spermatogonia. It is a precise, well-orchestrated sequence of events involving duplication of the genetic material(chromosomes), breakdown of the nuclear envelope, and equal division of thechromosomes and cytoplasm into two daughter cells. DNAis also spatially organized into loop domains on which specific regulatory proteins interact during cellular replication. Themitotic phase involves spermatogonia (types A and B) and primary spermatocytes (spermatocytes I). Developing germ cells interconnected by intracellular bridges produce the primary spermatocyte through a series of mitotic divisions. Once the baseline number of spermatogonia is established after puberty, the mitotic component will proceed in order to continue to provide precursor cells and to start the process of differentiation and maturation.

Meiosis

Meiosis is a complex process with specific regulatory mechanisms of its own. The process commences when type B spermatogonia lose form preleptotene primary spermatocytes. Thus,

eachprimary spermatocyte can theoretically yield four spermatids, although fewer actually result, because some germ cells are lost due to the complexity of meiosis. The primary spermatocytesare the largest germ cells of the germinal epithelium. Meiosis is characterized by prophase, metaphase, anaphase, and telophase.

In this, two successive cell divisions yield four haploid spermatids from one diploid primary spermatocyte. As a consequence, the daughter cells contain only half of the chromosome content of the parent cell. After the first meiotic division (reduction division), each daughter cell contains one partner of the homologous chromosome pair, and they are called secondary spermatocytes. These cells rapidly enter the second meiotic division (equational division), in which the chromatids then separate at the centromere to yield haploid early round spermatids. Meiosis assures genetic diversity and involves primary and secondary spermatocytes, which give rise to spermatids.

Spermiogenesis

Spermiogenesis is a process during which the morphologic changes occur during the differentiation of the spermatid into the spermatozoon. It begins once the process of meiosis is completed. The changes include the formation of the acrosome, condensation of the nucleus, shedding of most of the cytoplasm as residual bodies that are phagocytized by Sertoli cells, and also the formation of the neck, middle piece, and tail.

Types of semen abnormalities

TYPES	MEAN
Asthenozoospermia	reduced sperm motility
Azoospermia	Absence of sperm cells in semen
Oligozoospermia	Few spermatozoa in semen
Necrozoospermia	Dead or immobile sperms

AYURVEDA REVIEW OF OLIGOSPERMIA

- **Anuloma Shukrakshaya**

Indulgence in the Nidana like ViruddhaAhara, Asatmya Ahara, rukshaannapana sevana directly leads to Agni Vaishamyata responsible for production of Ama. Therefore due to malfunctioning of Jatharagni, there will be improper formation of Ahara Rasa leading to Rasakshaya. As a result Uttarottara Dhatu not nourished i.e. depletion of Raktadhatu and in the similar manner depletion of further tissue elements takes place and ultimately leads to Shukra kshaya. Further psychological factors and other factors related to food like excess

consumption of pungent, bitter, astringent, salty substances and Ati ushna sevana leads to vitiation of doshas.

- **Pratiloma Shukrakshaya**

If one indulges in excessive sexual intercourse then his Shukra gets diminished leading to emaciation and he falls prey for many disorders. The manasika karanas like chinta, bhayaetc. lead to stress and causes Vataprakopa which further strengthen the etiopathogenes is of the disease.

- **Shukrakshaya Lakshan**[5]

दौर्बल्यं मुखशोषश्च पाण्डुत्वं सदनं श्रमः|

क्लैब्यं शुक्राविसर्गश्च क्षीणशुक्रस्य लक्षणम्||

- (Cha.su 17/69)

- **Sampraptighataka of Shukrakshaya**

Dosha- Vata and Pitta (Vyana & Apana Vayu & Pachaka Pitta)

Dushya- Shukra

Agni - Jatharagni, Dhatvagni (Shukradhatvagni)

Srotas- Shukravaha, Manovaha

Udbhavasthana- AmaPakvashaya

Adhisthana- Shukravahasrotas

Rogamarga- Madhyama

Vyaktasthana- Shukra, Sarvasharira

Shukradusti

The Shukra which is vitiated by dosas is called Shukradusti i.e. the male factor responsible for male infertility. The male factor i.e. poor semen quality is responsible in about 50% cases of male infertility approaching to the physician.

Types of Shukradusti[6]**:-** Phenil, Tanu, Ruksa, Vivarna, Puti, Picchila, Anyadhatupasam Srita, Avasadi.

AIM AND OBJECTIVES

To evaluate the efficacy of Kokilaksha Beeja in Ksheena Shukra (Oligospermia)

DESCRIPTION OF DRUG

Kokilaksha Seed

Botanical name -Asteracantha longifolia

Family -Acanthaceae

Kokilaksha consists of dried seed of Asteracantha longifolia Nees.[Syn. Hygrophila auriculata (schumach.) Heine. Acanthaceae], a spiny, stout, annual herb, common in water logged places through out the country.

Bhavprakash nighantu has mentioned about Kokilaksha being beneficial for vrishya karma.

कोकिलाक्षस्तु काकेक्षुरिक्षुरः क्षुरकः क्षुरः |

भिक्षुः काण्डेक्षुरप्युक्त इक्षुगन्धेक्षुबालिका ||

क्षुरकः शीतलो वृष्यः स्वाद्वम्लः पित्तलस्तथा |

तिक्तो वातामशोथाश्मतृष्णादृष्ट्यनिलास्रजित् ||

(Bhavaprakasha Nighantu 4/192-193)

Rasapanchaka

Rasa	Madhura
Guna	Snigdha, Picchila
Veerya	Sita
Vipaka	Madhura
Dosha Karma	Vatapitahara

Vrishya action of Kokilaksha in Samhitas and Nighantus

- According to Sushruta Samhita Ksheenabaleeyam Vajikarana Chikitsa adhyaya, powder of svayamgupta and ikshuraka added with sugar and consumed followed by drinking fresh milk will not make the man feel deficient

स्वयङ्गुप्तेक्षुरकयोः फलचूर्णं सशर्करम् |

धारोष्णेन नरः पीत्वा पयसा न क्षयं व्रजेत् ||

(Su.chi.26/33)

- कोकिलाक्षस्तु मधुरः शीतः पित्तातिसारनुत् |

वृष्यः कफहरो बल्यो रुच्यः सन्तर्पणः परः ||१९३||

(Raja Nighantu 4/193)

- इक्षुरः क्षुरकोध कोकिलाक्षः क्षुर स्मृतः |

तैलकटोतीक्षुरिक्षुवालिकाचेक्षुगन्धिका |

इक्षुरः शीतलो वृष्यो गुरुर्वातकफास्रजित् ||३०९

(Madanapala Nighantu 1/309)

➢ कोकिलाक्षो हिमस्तिक्तः स्वाद्वम्लः स्निग्धपिच्छिलः ||१०९१||

वृष्यो वातामवाताश्मतृष्णादृष्टिखुडास्रजित् |

(Kaiyadeva Nighantu 1/1092)

DIAGNOSTIC CRITERIA

Semen Analysis

- Volume
- Total Sperm Count
- Motility
- Liquefaction
- Viscosity
- Ph

Chikitsiya Maatra, Anupana, Madhyama

Drug	**Kokilaaksha beeja Churna**
Dosa	5 gm BD
Route	Oral
Anupana	Milk

CONCLUSION

In Ayurvedic classics, there are number of formulations mentioned for Vajikarana. Although a number of research studies have been carried out, still an effective and safe formulation is needed for the management of Ksheenashukra. Kokilaksha is mentioned in Bhavaprakasha and Rajanighatu and other classical texts as having Vrishya property. The final conclusion is that Kokilaksha beeja has properties like madhura rasa, sheeta veerya, picchila & snigdha guna, which may be effective in oligospermia.

REFERENCE

1. Yadavji Trikamji Narayan Ram Acharya, editors. Susrutha samhita of Susruta with the Nibandasangraha commentary. Varanasi: Choukhambha Krishnadas Academy; 2014. Sutra sthana 15/4, 67.

2. Yadavji Trikamji Narayan Ram Acharya, editors. Susrutha samhita of Susruta with the Nibandasangraha commentary. Varanasi: Choukhamba Krishnadas Academy: Sutra sthana 1/8, 2014; 3.
3. Kumar, N., & Singh, A. K. Trends of male factor infertility, an important cause of infertility: A review of literature. Journal of human reproductive sciences, 2015; 8(4): 191-196.
4. Arthur C Guyton, John E Hall. Text Book of Medical Physiology. 11th ed. Pennsylvania: Elsevier/Sounders, 2006; Chapter 80, 998-99.
5. Yadavji Trikamji, editor. Charaka Samhita of Agnivesa with the Ayurveda Dipika Commentary. Varanasi: Chaukhamba Surbharati Prakashan: 2020. Sutra sthana 17/69, 103.
6. Yadavji Trikamji, editor. Charaka Samhita of Agnivesa with the Ayurveda Dipika Commentary. Varanasi: Chaukhamba Surbharati Prakashan: 2020. Chikitsa sthana 30/139-144, 640.
7. e-nighantu (NIIMH)