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Concept of *Beeja Dosha* WSR to Genetic Disorder

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Abstract

The primary hindrances to human development are genetic diseases. The incorrect development of genotype is one of the causes of these illnesses. The deviation of genotype is caused by a variety of circumstances. The *Ayurvedic* literature also discussed hereditary diseases, stating that *Beejdosha*, *Vikara*, *Shuddha Purush Shukra*, and *Stree Shonita* are necessary for the development of a normal person. The concept of *Beejabhaga* and *Beejabhagaavayava* are explained in shareera sthana of *charaka samhita*. *Acharya Charak* has described first about the component of *Beej* whether of male or female and designed them as *Beejabhaga* and *Beejabhagaavayava*. *Beej* plays a crucial role in the development of the embryo and the transformation of genetic data. *Ayurvedic* science not only gives importance to anatomical, physiological and pathological aspects of genetics but also emphasize the measures to prevent it. The factors responsible for inheritance are *Beeja*, *Beejabhaga* and *Beejabhagaavayava*. *Acharya sushruta* has also explained the types of *Napumsak* like *Asekya*, *Saugandhik*, *Kumbhak*, *Irshyak*, *Shand* on the basis of vitiation of *beej*. *Acharya charak* has explained eight types of different *garbh vikriti* like *diverta*, *pavanendriya*, *vakri*, *irshyak*, *narshand*, *narishand*, *snmskarvahi* and *vatik*. The transformation of parental characters depends heavily on *Beej*. Therefore, the subject has been covered in the current paper.

Keywords: Genetic disorder, *beej dosha*, *vikara*

Introduction

The ability to regulate viral and nutritional diseases has improved, and with it has come the understanding that genetic problems are a significant contributor to disability, mortality, and human tragedy [1].

In wealthy nations, hereditary illnesses account for 30% of postnatal infant mortality, 30% of paediatric hospital admissions, and 10% of adult hospital admissions [2].

The *beej dosha vikara* is explained in *Ayurveda* [3]. *Beej* plays a crucial role in the development of the embryo and the transformation of genetic data. For the alteration of parental characters, *Beej* is very necessary. *Shuddha purush shukra* and *stree shonita*, which are normal, are necessary for the development of a normal person. The abnormal change in *beeja* causes the embryo's creation and development to be incorrect. The idea of *beeja dosha* with genetic abnormalities has thus been elaborated in the present work by taking these factors into account. *Beeja* and its components *Beejabhaga* and *Bijabhagavayava* have been described by *Acharya Charak*. It relies on how much of a part and how much of the *beejabhaga* have been damaged for *beeja* or its component to

get vitiated that the children will be harmed by some disorder [4]. *Shukra* is referred to as *Beeja* (sperm).

The term "*beejabhaga*" describes the region of the sperm or ovum where organogenesis begins. For instance, the region of the ovum where the uterus emerges is known as *Garbhashaya Beejabhaga*. The unit of *Beejabhaga* is referred to as *Bijabhagavayava*. Any time the *dosha* becomes vitiated and has an impact on the sperm or the ovum, it will also have an impact on the unborn kid [4]. The normal and abnormal characteristics of *shukra* and *Aartava* have been described by our ancient scholar. There are *Sphatikabha*, *Drava*, *Snigdha*, *Madhur*, and *Madhugandhi* in *Shudha Shukra* [7] *su.sha*. The usual characteristics of *shukra*, such as *Snigdha*, *Ghana*, *Pichil*, *Madhur*, and *sphatika sannibham*, were also described by *Acharya Charak* [8]. Typical *artav* contain *laksha rasa su.sha* or *shashirekha parinayam* [9].

This paper aims towards explore to the concept *beeja dosha* and genetic disorder. The way *Vyau* purged the *Beeja* also determines whether there will be twins or multiple pregnancies [10]. If *Vaayu* divides *Beeja* into two equal halves, with one half predominating with *Shukra* and the other with

Shonit, then a male kid will be born from the first part, and a female baby from the second [11]. *Beeja* contains the seeds of oneself. Deformity caused by vitiation of the *beeja* and *beejabhaga* or vitiation of organ development in the progeny. *Bijabhagavayava* is in charge of them if their parents have a genetically transmissible sickness. Offspring will be affected generally if *beeja* vitiates. *Shukra's* aberrant characteristics, including *Fenil*, *Tanu*, *Ruksha*, *Vivarna*, *puti*, and excessive *pichil Avsadi*, have been detailed by *Acharya Charak* [12] *Vikrut Shukra* is in charge of responsible for *klavya* disease.

Aim & Objectives

To study *beej dushti* as a causative factor in genetic disorder.

Description of Beeja Dosha

Shukra (sperm) and *Shonita* (ovum) are referred to as *Beeja* [4]. The embryonic fetus, also known as the *garbha* (fetus), is created when the *Shuddha Shukra* and *Shonit* fuse inside the *Garbhashaya* (uterus) [1]. *Shukra*, the seventh *dhatu* of the human body, plays a role in the formation of *garbha* (helps with conception) from the partner's side, according to *Ayurveda*. Even though *Acharya Susruta*, *Ashtang Sangrah*, *Bhavprakash*, *Harita*, and *Arundatta* imagined the *Stri Shukra*, this *shukra* is not taking part in the formation of the *garbha* (in the process of conception). According to *Susruta*, the blood drawn from both *dhamanis* (uterine vessels and their endometrial capillaries) has a faint black tint and a distinct odor is brought downwards to vaginal orifice by *vayu* is called *shonita* or *artava* [8].

According to another scholar *Vagbhata*, the blood reaching uterus and coming out for three days in every month is called *Artava* [9] i.e. *artava* can be taken as menstrual cycle in today scenario. They have also mentioned age of menarche and menopause 12 yrs and 50 yrs of age respectively [8, 9].

Another scholar, *Vagbhata*, claims that the term "*Artava*" refers to the blood that enters the uterus and leaks out for three days each month. In the modern world, this is equivalent to the menstrual cycle. Additionally, they mentioned the menarche and menopause ages of 12 and 50 years, respectively.

Acarya Susruta has described 8 *shukra* and 8 *shonita doshas* in *Sharira Sthan, Shukra-Shonita-Shuddhi adhyaya* [10]. *Acarya Susruta*, just after describing eight disorders of *shukra*, has enumerated eight disorders of *artava* [11] i.e. One from each *dosha*, and *rakta* (total four), three from combination of two *doshas* and one from combination of all the three *doshas*. After describing the clinical features of all abnormalities of *shukra* and *shonita* he has also explained the treatment of all the curable problems.

Descriptions of Genetic Disorders in Ayurveda Classics

Classical *Ayurvedic* texts mention about genetic disorders with various terms like *sahaja yoga*, *kulangara gas* or *adibalapravttarogas*. Diseases like haemorrhoids, certain skin diseases and diabetes are some of the diseases that have been considered to be inherited in *Ayurveda*. *Sahaja Yoga* means that which is present from birth [5], *Kulajaroga* means that which runs in families [5] and *adibalapravttaroga* [6] means that which arises from defects in the male and female reproductive elements. There are also many anomalies at birth which have been traced to have genetic origins in *Ayurveda*. The ancient physicians put forth theories to explain the phenomenon of genetically inherited diseases. Eight disorders by birth are also described in the *Ayurvedic* texts-giant and dwarf, obese and thin, hirsute and hairless, albinic and

melanoid. *Ayurvedic* texts have also discussed various sexual anomalies at birth including impotency and maldevelopment of sexual organ.

Discussion

Genetic transmission of diseases was understood and described in the early stages of the evolutionary history of *Ayurveda*. The *Caraka Samhitā* and the *Susruta Samhitā*, the earliest texts of *Ayurveda*, discuss about the genetic basis of diseases and also illustrate the concept citing examples of a few disease.

Acharya Charak has described three genetic units in the form of *Beeja* (Germinal cell), *Beejabhaga* (Chromosome) and *Bijabhagavayava* (Gene).

Beeja are male or female gametes and *Beejabhaga* & *Bijabhagavayava* are parts of it.

Beeja: *Acharya Susruta* has described 8 *shukra* and 8 *shonita doshas* in *Sharira Sthan, Shukra-Shonita-Shuddhi adhyaya*-One from each *dosha*, and *rakta* (total four), three from combination of two *doshas* i.e. *Granthi*, *Putipuya*, *Ksheena* and one from combination of all the three *doshas* i.e. *Mutrapurishretas Gandhi*. Any deformity in *shukra* will lead into *klavya* or *Napunsakta* disease. [10]

Beejabhaga and Bijabhagavayava: The *Beejabhaga* is the component of *Beeja* and is responsible for the development of different body organs and tissues of the body. It may be compared with the chromosomes which are passed on as units from one generation to other generation, one from each of the parents. *Bijabhagavayava* should be taken as a part of *Beejabhaga* carrying hereditary characters. So, it may be compared with the gene, which is the functional unit of heredity and is mainly responsible for expression of a particular trait in an individual.

Acharya Charaka has said that vitiated *Beeja* (Ovum or sperm) is responsible for the disease or formation of defective tissue or particular body part or organ. If parents have certain diseases like *kushtha*, then it is reflected in the *beeja* and hence can cause same illness to the offspring [4].

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Conclusion

Since very early times, before concepts like chromosomes, genes, DNA, and genomes existed, *Ayurveda* science had a basic understanding of genetics. The facts that genetic illnesses are not caused by any fault in the mother or father but rather in the *Beeja*, *Beejabhaga* & *Bijabhagavayava* of the parents, which have been explained in our *Ayurvedic* classics.

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