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ASHTA NINDITA PURUSHA WITH SPECIAL RESPECT TO GENETICS IN AYURVEDA: AN OVERVIEW

Sindhu BR[1], Mahesh Hirulal[2], Raghavi Rajan BR[3]

Post Graduate Scholar[1,3], Associate Professor[2]
Department of *Roga Nidana Evam Vikruthi Vigyan*, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan-573201, Karnataka, India.

Corresponding Author: sindhubr1997@gmail.com

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ABSTRACT

Genetics is the study of genes, genetic variation and heredity in organisms. In classics, hereditary disorders are referred to as *Adibala Pravrutta Vikara, Sahaja Vikara, Bija Bijabhagaavayava Dushti Vikara,* even the *Ashta Nindita* can be taken, as one among the *Nidana* mentioned is *Bija Svabhavat. Ashta Nindita Purusha* is a concept that explains extremely undesirable characteristics: *Atideergha, Atihrasva, Atisthula, Atikrusha, Atigaura, Atikrushna, Atiloma, Aloma*[1]. In human beings, half of the chromosomes come from maternal and half from paternal chromosomes or genes, similar to *Matrija* (maternal) and *Pitrija* (paternal) *Bhavas*. Suppose any changes in these factors will directly impact the progeny. The factors responsible for inheritance are *Bija, Bijabhaga* and *Bijabhagaavayava*[2]. The pattern of inheritance for *Ashta Nindita* can be explained with Autosomal dominant affected and Autosomal recessive affected by considering the explanation of causes *Kubja (Atihrusva*) with the example of *Kushta* given by *Acharya Charaka* in *Khuddika Garbhavakranthi Sariram Adhyaya*[3]. The defects in the *Bija, Atma Karma, Garbhashaya, Ahara Vihara,* and *Dosha* get vitiated, which results in the *Vaikruta Samsthana* (deformity of shape), *Vaikruta Varna* (deranged complexion)[4]. Ayurveda suggests that the prevalence of congenital or genetic disorders can be controlled by various approaches like following *Garbhini Paricharya* and avoiding *Garbhopaghathkara Bhava*. Here is an attempt to understand the concept of eight undesired body types concerning their genetic inheritance in the light of modern genetics.

Keywords: *Ashta Nindita*, Genetics, Hereditary.

INTRODUCTION

An individual's health status can be assessed through an inspection of his building. A person's build depends on hereditary traits and his present nutritional status. *Prakruti*, *Pramana* and *Samhanana* are different concepts which will elaborate on the personal nature of building. The *Lakshanas* of *Prashasta purusha*/*Anindita Purusha*(Healthy individual) are *Samamamsa Pramana* (Person endowed with well-formed muscles), *Sama Samhanana* (Compactness), *Drudha Indriya Vikaranam Na Balanabhi Bhuyate* (Strong sense organs will not be afflicted with muscular diseases), *Kshuta Pipasa Atapa Shita Vyayama Samsaha* (withstand hunger, thirst, heat, cold and exercise), *Sama Pakta Sama Jara* (Food gets digested and gets assimilated properly), *Sama Mamsa Chaya* (Resulting in proper nourishment of *Mamsa* and all *Dhatu*)[5].

Ashta Nindita Purusha is a concept that explains extremely undesirable characteristics. They are as follows –1) *Atidirgha* 2) *Atihrasva* 3) *Atiloma* 4) *Aloma* 5) *Atikrishna* 6) *Atigoura* 7) *Atisthula* 8) *Atikrisha*. *Ashtonindatiya purusha* is *Shariram Adhitrutya Nindita Purushas,* which means involve only *Sharira*, no involvement of *Manas*[6]. Among the above, *Nandita Purushas*, *Atisthula*, and *Atikrisha purusha* are more prevalent, considered *Nindita Vishesha*[7,] and most despised among the eight undesirable persons. These two people are more prone to getting diseases quickly. Therefore, Acharya Charaka describes them in detail. Comparing *Atisthula* and *Atikrusha, Atisthula Purushas* are more liable to be at health risk than *Atikrusha*[8]. *Acharya Charaka* has mentioned that one *Nidana* for *Atisthula* is *Bija Svabhava*[9,] and for *Atikrusha* is *Prakruti*[10]. *Bija Svabhava* means the progeny developed from the *Sthula Maata* & *Pita*. *Prakruti* is the *Nidana* for *AtiKrusha, which* implies in *Cakrapani Tikka*, it was mentioned as *Bija*.

Genetics and Genetic Disorder

Genetics is the scientific study of genes and the heredity of how certain qualities or traits are passed from parents to offspring due to changes in DNA sequence. A gene is a DNA segment containing instructions for building one or moremolecules that help the body work. Our DNA, including all of our genes, is stored in chromosomes, structures where proteins tightly wind-up DNA to fit in the nucleus. Humans typically have 23 pairs of chromosomes in their cells. The two chromosomes in each pair contain the same genes. Still, they may have different versions of those genes because we inherit one chromosome in each pair from maternal and paternal chromosomes, respectively. The reproductive cell's ovum and sperm randomly receive one chromosome from each of the 23 sets instead of both, so a fertilised egg will contain the 23 pairs needed for typical development.

Genetic disorders occur when a mutation (a harmful change to a gene, also known as a pathogenic variant) affects your genes or when you have the wrong amount of genetic material. Genetic disorders can be:

1. Chromosomal: This type affects the structures that hold your genes/DNA within each cell (chromosomes). There will be missing or duplicated chromosome material.

2.Complex (multifactorial): These disorders stem from a combination of gene mutations and other factors, including chemical exposure, diet, and certain medications.

3. Single-gene (monogenic) conditions occur from a single-gene mutation.

DISCUSSION

Genetics in *Ayurveda*

The concept of genetics has been explained in different *ayurvedic* classics in various contests concerning *Adibala Pravrutta /Sahaja/Kulaja Vikara, Bija, Bijabhaga, avayava vikriti, Janmabala pravrtta/Garbhaja Vikara, Matrujapitrujabhaava,* role of *bijabijabhaaga* in various diseases, *Ritumaticharya, Garbhineecharya, Shadbhaava, atulyagotreeyashaareera* etc. *Acharya Charaka* mentions that the characteristics of parents will be transmitted to their offspring. The factors responsible for inher-

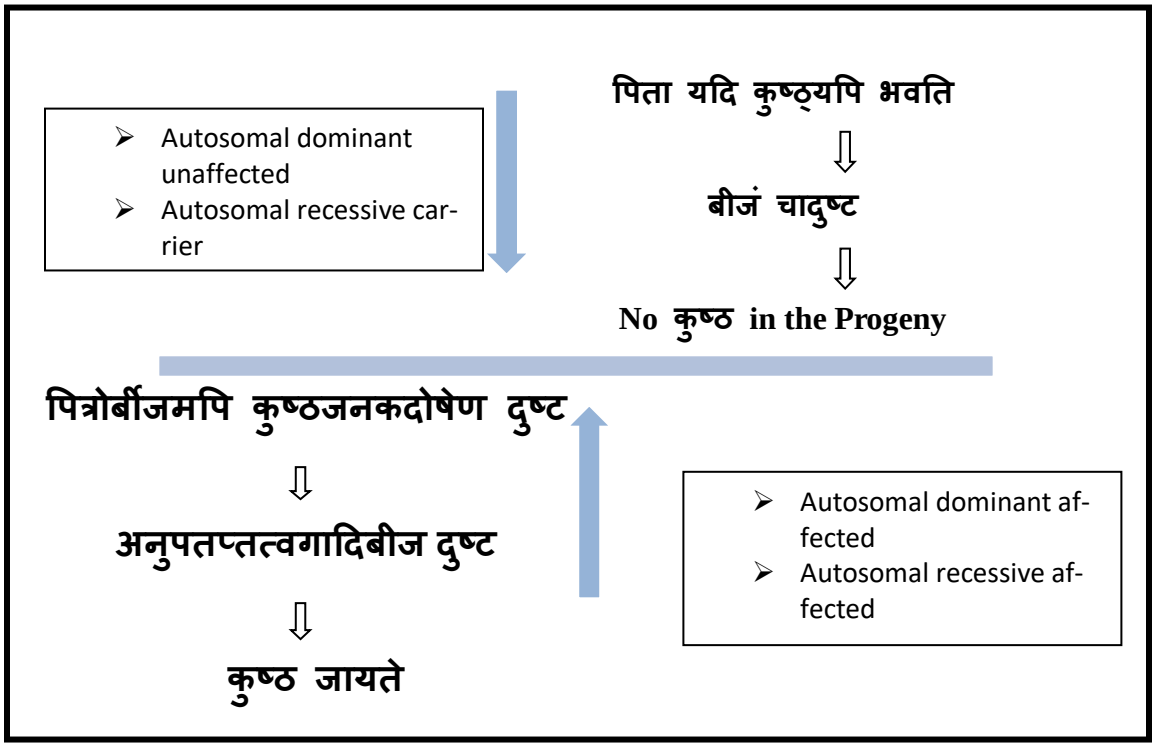
itance are *Bija, Bijabhaga* and *Bijabhagaavayava. Bija* means both the gametes. This *bija* is the collection of functional units representing the structures and features of all parts and organs of an individual. This functional unit capable of forming an offspring resembling the parent is called *bijabhaga*. Still, minute fragments of *bijabhaga* are *bijabhagaavayava.* In short, *bijabhagaavayava* is the fundamental unit of inherence[11].

Table 1: *Ashta Nindita Purusha* with genetics

Ashta Nindita	**Vitiation of *Shadgarbhakara Bhavas*[12]**	**Probable Modern Genetics**
Atisthula	➢ Vitiation in *Matruja* and *Rasaja Bhava* ➢ Excess intake of *Madhura rasa* by *Garbhini* led to *Atisthaulya*	➢ It may be autosomal recessive or dominant. ➢ It is due to mutations in the leptin signaling, CYP27A1, TFAP2B, PARK2, IFNGR1, UCP 2 & 3 which codes for uncoupling of proteins in brown adipose tissue led to Monogenetic & Polygenic Obesity
Atikrusha	➢ Vitiation in *Matruja* and *Rasaja Bhava*	➢ Variation in Genes called FTO, IRS1 and SPRY2 were associated with hereditary leanness.
Atidirgha	➢ Vitiation in *Pitruja, Atmaja Bhava* ➢ अधिके इति अधिकप्रमाणे||	➢ Gigantism is a form of familial pituitary adenomas that lead to gigantism such as Multiple endocrine neoplasia type 1 and 4, X-linked Acro gigantism (X-LAG).
Atihrusva	➢ Vitiation in *Pitruja, Atmaja Bhava* ➢ *Bija Doshat* lead to *Kubjatva* ➢ हीने इति हीनप्रमाणे|	➢ Achondroplasia is the most common form of short-limbed dwarfism.
Atiloma	➢ Vitiation in *Pitruja, Atmaja* & *Satmya Bhava*	➢ It is an autosomal dominant cutaneous disorder. ➢ Hypertrichosis lanuginose caused by a paracentric inversion mutation of the q22 band of chromosome 8. Generalized hypertrichosis linked to chromosome Xq24-27.1.
Aloma	➢ Vitiation in *Pitruja, Atmaja* & *Satmya Bhava*	➢ Autosomal recessive hypotrichosis can be caused by mutations of the LIPH, LPAR6, or DSG4 gene. genes provide instructions for making proteins, involved in the growth and proliferation of cells within hair follicles.
Atigaura	➢ Vitiation in *Matruja, Atmaja* & *Satmya Bhava*	➢ Autosomal recessive inheritance pattern. ➢ Albinism affects the production of melanin, the pigment that colors skin, hair and eyes.
Atikrishna	➢ Vitiation in *Matruja, Atmaja* & *Satmya Bhava*	➢ Mutations of one gene that encodes the melanocortin 1 receptor (MC1R), a protein involved in regulating melanin pigmentation.

AUTOSOMAL DOMINANT AND RECESSIVE IN *AYURVEDA*

The *Bija* contains the parts for manifesting all major and minor body parts. Thus, *Bija,* the aggregate of all these, develops a person with similar body parts. For example, Even if one of the parents has *Kushta* when the part of *Bija* that is responsible for the manifestation of the skin is not damaged, the offspring will not get *Kushta*- this can be compared to traits like Autosomal dominant unaffected and Autosomal recessive carrier, or if the specific part of *Bija* responsible for the manifestation of the *Tvak* is damaged, the offspring will suffer from *Kushta*- this can be compared to the traits like Autosomal dominant affected and Autosomal recessive affected offspring. *Acharyas* explained that it can even be considered for *Kubja (Atihrusva*), etc., and even for the *Ashta Nindita*[13].



Reason for *Vaikruta Samsthana*

Due to the defects in the *Bija*, *Atma Karma*, *Garbhasaya*, *Ahara Vihara*, the *Dosha* gets vitiated and, which results in the *Vaikruta Samsthana* (deformity of shape), *Vaikruta Varna* (deranged complexion) and also *Indriya Vaikruta* (impairment of sensory and motor organs of the progeny), which directly implies to defect in the all these factors leads to undesirable body constitution like *Atideergha*, *Atihrasva*, *Atisthula*, *Atikrusha*, *Atigaura*, *Atikrushna*, *Atiloma*, *Aloma*[14].

CONCLUSION

With available literary sources of *Ayurveda*, it can be concluded that the ancient Indian civilisation had observation and knowledge about hereditary and genetics. The concept of *Bija*, *Bijabhaga* and *Bijabhagaavayava Dushti* will explain the transmission of genetic materials from the paternal and maternal sides to the offspring. The combined effect of transmitted genes with different lifestyle and environmental factors may lead to other disorders, as Ayurveda explained about the importance of *Shuddha Sukra Shonita & Shadgarbhakara Bhavas*. Current-day research also proves that the parent germ cell mutation or epigenetic factors influence the genotype and phenotype. The disproportionate person is devoid of physical strength, lustre, and happiness. Life expectancy is also low in such individuals[15].

Acharya has explained various ways about these genetic processes and also about the ways to prevent the factors influencing the gene expression with or without changing genotype by avoiding *Garbha Upaghatakara Bhavas* and even about consanguineous marriages, which are associated with increased risk of congenital malformation and autosomal recessive diseases with increased postnatal mortality in the offspring. Charakacharya has expressed the same principle in the *Athulyagothreeya Shareera*. Hence, the concept of genetics is very well mentioned in Ayurveda, and the eight undesired body types have genetic predispositions.

REFERENCES

1. Acharya YT, editor. Caraka Samhita with Ayurveda Deepika commentary by Cakrapanidatta on Caraka Samhita of Agnivesha, Sutrasthana; Ashtauninditiya adhyayam: Chapter 21, Verse 3. Reprint edition

2016.Varanasi: Chaukhamba Surbharati Prakashan,2016; p.116
2. Vidyanath R, editor. English translation with Cakrapani commentary on Caraka Samhita, Sarirasthana; Khuddika Garbhavakranthi Sariram: Chapter 3, Verse 17. First Edition 2022. Varanasi: Chaukhambha Prakashak,2022; Vol.II.p.588
3. Vidyanath R, editor. English translation with Cakrapani commentary on Caraka Samhita, Sarirasthana; Khuddika Garbhavakranthi Sariram: Chapter 3, Verse 17. First Edition 2022. Varanasi: Chaukhambha Prakashak,2022; Vol.II.p.589
4. Vidyanath R, editor. English translation with Cakrapani commentary on Caraka Samhita, Sarirasthana; Atulyagotriya Sariram: Chapter 2, Verse 29. First Edition 2022. Varanasi: Chaukhambha Prakashak,2022; Vol.II.p.548-549
5. Acharya YT, editor. Caraka Samhita with Ayurveda Deepika commentary by Cakrapanidatta on Caraka Samhita of Agnivesha, Sutrasthana; Ashtauninditiya adhyayam: Chapter 21, Verse 18-19. Reprint edition 2016.Varanasi: Chaukhamba Surbharati Prakashan,2016; p.117
6. Acharya YT, editor. Caraka Samhita with Ayurveda Deepika commentary by Cakrapanidatta on Caraka Samhita of Agnivesha, Sutrasthana; Ashtauninditiya adhyayam: Chapter 21, Verse 3. Reprint edition 2016.Varanasi: Chaukhamba Surbharati Prakashan,2016; p.116
7. Acharya YT, editor. Caraka Samhita with Ayurveda Deepika commentary by Cakrapanidatta on Caraka Samhita of Agnivesha, Sutrasthana; Ashtauninditiya adhyayam: Chapter 21, Verse 4. Reprint edition 2016.Varanasi: Chaukhamba Surbharati Prakashan,2016; p.116
8. Acharya YT, editor. Caraka Samhita with Ayurveda Deepika commentary by Cakrapanidatta on Caraka Samhita of Agnivesha, Sutrasthana; Ashtauninditiya adhyayam: Chapter 21, Verse 17. Reprint edition 2016.Varanasi: Chaukhamba Surbharati Prakashan,2016; p.116
9. Acharya YT, editor. Caraka Samhita with Ayurveda Deepika commentary by Cakrapanidatta on Caraka Samhita of Agnivesha, Sutrasthana; Ashtauninditiya adhyayam: Chapter 21, Verse 4. Reprint edition 2016.Varanasi: Chaukhamba Surbharati Prakashan,2016; p.116
10. Acharya YT, editor. Caraka Samhita with Ayurveda Deepika commentary by Cakrapanidatta on Caraka Samhita of Agnivesha, Sutrasthana; Ashtauninditiya adhyayam: Chapter 21, Verse 12. Reprint edition 2016.Varanasi: Chaukhamba Surbharati Prakashan,2016; p.117
11. Vidyanath R, editor. English translation with Cakrapani commentary on Caraka Samhita, Sarirasthana; Khuddika Garbhavakranthi Sariram: Chapter 3, Verse 17. First Edition 2022. Varanasi: Chaukhambha Prakashak,2022; Vol.II.p.588-589
12. Acharya YT, editor. Caraka Samhita with Ayurveda Deepika commentary by Cakrapanidatta on Caraka Samhita of Agnivesha, Sharirasthana; Kuddika Garbhavakranthi: Chapter 3, Verse 6,710,11,12,13. Reprint edition 2016.Varanasi: Chaukhamba Surbharati Prakashan,2016 ; p.310-312
13. Vidyanath R, editor. English translation with Cakrapani commentary on Caraka Samhita, Sarirasthana; Khuddika Garbhavakranthi Sariram: Chapter 3, Verse 17. First Edition 2022. Varanasi: Chaukhambha Prakashak,2022; Vol.II.p.589-590
14. Vidyanath R, editor. English translation with Cakrapani commentary on Caraka Samhita, Sarirasthana; Atulyagotriya Sariram: Chapter 2, Verse 29-30. First Edition 2022. Varanasi: Chaukhambha Prakashak,2022; Vol.II.p.548-549
15. Vidyanath R, editor. English translation with Cakrapani commentary on Caraka Samhita, Vimanasthana; Rogabhisagjitiya: Chapter 8, Verse 17. First Edition 2022. Varanasi: Chaukhambha Prakashak,2022; Vol.II.p.422-424

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