

DANTA SHAREERA AVALOKANA & DANTA ROGAS- A CONCEPTUAL STUDY

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ABSTRACT

Mouth is considered as a window into health of the body by being a gateway of the alimentary canal and by this fact it is to be understood as one of the most important part of the body. Importance has been put on to Dental hygiene to maintain health and beauty. The glorious and beautiful smiles flash only with glossy white and well arranged teeth. These are the most important organ of mechanical digestion in body. Main function of teeth is to pulverize the food, the enzymes cannot chemically digest it. Therein, painful teeth, absence of teeth or diseased teeth and gums often lead to indigestion and insufficient utilization of the undigested food, results in malnutrition. The Healthy Status of the Tooth can effectively managed with Nidana parivarjana and regular practice of Dinacharya. Maintaining proper oral hygiene helps in preventing dental health and other diseases of oral cavity. Early management of dental pathology helps in saving the teeth and its associated structures.

KEYWORDS: Oral health, Dantagata Roga, Dantabheda, Dantasampath.

INTRODUCTION

The healthy teeth are very much necessary for healthy body. Oral health influences general well-being and also quality of life. Oral diseases can be debilitating and are a major health issue discussed worldwide. Dentition is one of the important landmark in accessing the growth and development of a child. Acharya kashyapa has mentioned detailed description of dantabheda and its avasta in Dantajanmika adhyaya^[1], However Acharya Charaka has mentioned teeth among the body parts growing after birth, whereas Acharya Sushruta has not dealt with this concepts and Vagbhata Acharya have dealt mainly the complications rising during dentition period.

Danta Shareera

Period of Dentition¹⁻³² teeth are in human beings, therein 8 erupt once which are termed as **SAKRUJATA** (permanent teeth) and these teeth are mounted in own /original root and the eruption of teeth that occurs twice is called **DWIJA**(milk or temporary teeth) If the formation of tooth takes place in a particular month, then the actual eruption of the tooth will take place after a particular interval and the tooth will fall after particular year i.e.; If tooth formed at 8month,after 8 days actual eruption of tooth ,tooth falls when child attains 8 yrs.

Danta bheda- Samudga –Teeth decrease in number due to falling, mostly seen in cases of dental caries. **Samvrta-inauspicious** and discoloured teeth. **Vivruta-**incompletely covered by gums and easily prone to afflict with diseases. **Sampath-** compactness of gums, stableness of root, white in colour, smooth, best quality of teeth.

Table 1: Shows Dantautpattikala and its effects with respect to particular month.

| Danta utpatti kala | Effects |
|-----------------------|--|
| 4 th month | Weak, decay early& afflicted by many diseases (<i>Alpa ayushya and durbala</i>) |
| 5 th month | Loose or shaky with morbid sensitivity & gets easily afflicted with various diseases |
| 6 th month | Less strong, deformed, irregular in shape, susceptible for dental caries |
| 7 th month | <i>Vishamakara</i> (having 2 sockets,split) mostly have cracks |
| 8 th month | Best teeth with all qualities of Danta sampath |

Table 2: Shows classification of teeth according to Ayurveda and modern.

| SL NO | According to Ayurveda | According to Modern |
|-------|--------------------------------|---------------------|
| 1 | Rajadanta (central incisors) | Incisors |
| 2 | Basta(lateral incisors) | Canine |
| 3 | Damstra(canine) | Premolar |
| 4 | Hanavya (molars and premolars) | Molar |

Modern Types of Teeth View

Mainly 2 types of dentition-**1.Primary** (deciduous)- 20 teeth- begin to form from 1st trimester of pregnancy, erupt by around 6 months and complete dentition by 3 years of age. **2.Secondary** (permanent)-32 teeth- erupt

by 6yrs of age and complete eruption mostly by 12 years of age except 3rd molar(appears at late teens or early 20's of age). Each tooth is made up four components: Enamel, Dentin, Cementum and Pulp.

Dantagata Roga**Table 3: Shows Dantagata roga according to Sushruta samhitha, Astanga, Yoga ratnakara and Sharangadara samhitha.**

| Sl. No. | SU.SAM | ASTANGA | Y.R | SH.SAM | MODERN |
|---------|---------------|---------------|----------------|---------------|--------------------------|
| 1 | DALANA | SHEETADANTA | DALANA | DALANA | CRACKED TEETH |
| 2 | BHANJANAKA | DANTABHEDA | BHANJANAKA | DANTA BHEDA | FRACTURED TEETH |
| 3 | KRIMI DANTA | KRIMI DANTA | KRIMIDANTA | KRIMI DANTA | DENTAL CARIES |
| 4 | SHYAVA DANTA | SHYAVA DANTA | SHYAVA DANTAKA | SHYAVA DANTA | DEAD TOOTH |
| 5 | DANTA HARSHA | DANTA HARSHA | DANTA HARSHA | DANTA HARSHA | HYPER-AESTHESIA OF TOOTH |
| 6 | DANTA SARKARA | DANTA SARKARA | DANTA SARKARA | DANTA SARKARA | TARTAR |
| 7 | KAPALIKA | KAPALIKA | KAPALIKA | KAPALIKA | NON VITAL TEETH |
| 8 | HANU MOKSHA | ---- | ---- | ---- | DIS-LOCATION OF JAW |
| 9 | ---- | DANTA CHALA | ---- | DANTA CHALA | LOOSE TEETH |
| 10 | ---- | KARALA DANTA | KARALA | KARALA DANTA | MAL-OCCLUSION OF TOOTH |
| 11 | ---- | VARDHANA | ----- | ADHI DANTA | SUPER NUMERARY TOOTH |
| TOTAL | 08 | 10 | 08 | 10 | |

1. Dalana

Acc to Sushruta-due to the vitiated vata several teeth get cracked & cause intolerable cutting type of pain. Acc to Vagbhata called as Sheetha danta (as patient can't be able to eat or drink cold items). Commonly observed in

the old, caries teeth, cracked teeth in which the nerve filament of teeth is exposed.

Treatment- Acc to Sushruta- Asadhya, Acc to Vagbhata-Swedhana (hot water gargling) Dantapali

lekhana(with vrihimukha sastra) followed by agnikarma(usnataila), gharshana or pratisarana (musta, saindava, dadima etc), kavala(ksheerivrikhsa kashaya).

Modern correlation- Cracked teeth/ odontalgia.

CRACKED TEETH- An incomplete fracture through the body of tooth causing pain. Mild excruciating pain is felt at the initiation or at the release of biting pressure. Type of pain depends on the extension of crack into enamel, dentine or pulp cavity.

Treatment –If incomplete dentine and enamel fracture-full crown restoration & If complete vertical fracture involving pulp and root –extraction of tooth.

2. Bhanjanaka

Due to vitiation by Kaphavata- face or mouth become distorted (vakram), teeth are fractured due to which experiences severe pricking, tearing and bursting type of pain. Acharya vagbhata-explains as Dantabheda.

Treatment-Acc to sushruta – Asadya. Acc to vagbhata-vatashamaka chikitsa, Gandusa (yastimadhu tila sidha ksheera)

Modern correlation- Fractured tooth.

FRACTURED TOOTH- Occurs in trauma that result either in injury of pulp with or without damage of crown or root or in displacement of root from sockets. Causes mainly -Auto or Sports accidents, Child abuse and young children learning to walk.

Treatment – in fractured crown with pulp exposure-eliminate discomfort of patient, pressure vitality of tooth and restoration of crown & in fractured crown-pulpectomy.

3. Krimidanta

Teeth having black cavities, becomes loose from their roots associated with discharge, swelling at their roots and due to vata vitiation-bouts of severe pain without any apparent cause. Nidana –that is filled with annamala(*annamala purithe*) or due to unhygienic conditions like improper brushing, having very hot and cold items etc

Samprapthi(acc to vag)- Vata vitiation → Danta kshata → Dantamoola shotha → Sushira → Production of Krimi → chala danta → tooth decay.

Treatment² –If tooth is not moving- swedhana followed by raktamokshana, Vatagna dravya avapidana nasya, Snaihika gandusha and snidga bhojana, bhadradarvyadi/punarnavadi lepa etc.

-If tooth is moving at the site- extraction followed by agnikarma.

-If tooth is perforated- Filling the gap with guda or madhuchista, Filling gap with milk of saptachada or arka -For pain relieving –Dhoopana with seeds of kantakari, applicaton of clove oil at the site, sarshapa taila nasya.

Modern correlation – Dental caries

DENTAL CARIES- Microbial disease of calcified tissues of teeth, characterized by demineralization of inorganic portions and destruction of organic substance of the tooth. Causes- Dietary factors (Carbohydrates), Microorganisms (*Streptococcus mutans*), Systemic factors(Hereditary/ pregnancy), Host factors(poor oral hygiene, improper brushing), Immunological factor. Control of dental caries- 1.Control of active lesion (excavation of carious lesion followed by restoration). 2. Nutritional measures for caries control – Diet should be high in fat, low in carbohydrate & free from sugar, Phosphate diet causes significant reduction in caries. 3. Mechanical measures- Tooth brushing- twice a day, mouth rinsing, dental floss. 4. Chemical measures- Fluoride, Silver nitrate.

4. Shyavadanta

Due to vata, pitta and raktha vitiation(vagbhata), pitta and rakta vitiation(sushruta) the enamel (danta twacha) gets burnt/charred and become black or blue.

Treatment -Asadya

Modern correlation – Dead tooth/Tooth staining/Discolouration

TOOTH STAINING-Discoloration ranges from black, bluish black, green, brown, yellowish, grayish etc. Classified as-1. Extrinsic stain-due to cosmetics, coffee, tobacco stain, mouth rinse, pigments in foods. Intrinsic stain- due to deposition of substances within enamel and dentin. Causes-Decomposition of pulp tissue, Excessive hemorrhage following pulp removal, Trauma, Medicaments – Iron preparation, Filling material- Gold, Amalgam, copper

Treatment –Extrinsic-Scaling and polishing with paste & Intrinsic – Fluoride stains are treated by applying bleaching solution

5. Dantaharsha

Due to vata vitiation, teeth become unable to bear the touch of cold or hot (sour things - vagbhata) – sheetha-usna-amla asahishnuta. Commonly observed in krimidanta in which due to cracking or perforation of teeth the nerve filaments is exposed and cause sensitivity to cold or hot things.

Treatment-kavala or gandusha-chatarsnehasarpi/ trivruth gritha, snaihika dhooma and nasya, shirovasti with vatagna taila, snigda bhojana(mamsa rasa, ksheera), vatahara chikitsa

Modern correlation- Hyperesthesia of the tooth

HYPERESTHESIA OF THE TOOTH- Root surfaces may become hypersensitive to thermal changes or tactile stimulation. Causes –exposure of root surface due to gingival recession or pocket formation, secondary to scaling, root planning or surgical procedures, manifested as pain induced by cold or hot temperature, by citrus fruits or sweets, contact with toothbrush or dental instruments.

Treatment – removal of calculus, plaque control, desensitizing agents

6. Danta Sarkara

Due to improper cleaning of mouth and teeth, the vitiated vata dries the kapha and mala, teeth appears with yellow or brown colored precipitations and foul smell, Danta sarkara is Kapha vataja vyadhi. If not treated in time leads to tooth decay and other complications

Treatment- Removal of tartar by avoiding injury to the root, Pratisarana-lakshachoorna and honey, Dantaharsha line of treatment can be adopted.

Modern correlation –Tartar/ Calculus

CALCULUS- Adherent calcified or calcifying mass that forms on the surface of natural teeth and dental prostheses. Classification – Supragingival/Salivary calculus, Subgingival/ Serumal Treatment –proper tooth brushing, subgingival and supragingival scaling, maintainance of oral hygiene.

7. Kapalika

Danta sarkara if not treated and cause injury to enamel and then enamel of teeth along with tartar, gets cracked and separated , which gradually destroys the teeth. Pain burning and sensitivity to hot and cold thing, Kapalika is a Kapha vataja vyadhi which is kruchrasadya in nature but advised to treat like Danta harsha.

Modern correlation- Non vital teeth

NON VITAL TEETH- Injury to the calcified structure of teeth and to the supporting tissues by various physical, chemical or bacterial noxious stimuli may cause changes in pulp and periradicular tissue. These changes are either reversible or irreversible. Causes – Deep caries and toxins associated caries, Drilling, Pathologic wear (Abrasion), Accidental trauma.

8. Hanumoksha

Specifically not related to Danta roga, but contain danta shoola as a lakshana so sushrutha included in Dantaroga. Due to head injury, loud talking, biting hard substance and lifting the heavy weights, vata gets vitiated and deranges the Hanu sandhi. Its Kapha vataja vyadhi Treatment- Arditavat chikitsa, Shirovasti, Nasya, Dhooma, Upanaha.

Modern correlation – Dislocation of jaw

DISLOCATION OF JAW- A dislocated jaw occurs when the lower part of the jaw is pulled away from one or both of the TMJ joints. Interfere with eating and sleeping, becomes stiff, swollen and sore. Pain becomes worse on movement, unable to close and open, difficulty in biting, joint noises. Causes- injury or accidents. Treatment-manipulate the joint back into its correct position manually or by surgery.

9. Dantachala

On neglecting caries teeth, cracked teeth, tartars, gum diseases causes loose teeth causes pain and discomfort during mastication or drinking it causes so many complications even the healthy teeth and mandible or maxilla also affected.

Treatment³-Gandusha –Sneha mishritha dashamoola kwatha, Gharshana- Tutta, Lodra, Pippali, Triphala, saindava lavana mixed powder, Snigda nasya, Snigda kavala, Snigda bhojana.

Modern correlation – loose tooth/Tooth mobility

TOOTH MOBILITY- Mainly of 2 types-1.Physiological mobility- Slight degree of mobility is seen in all teeth, which is variable for different teeth and at different time of day(Maximum in morning and gradually decreases).2.Pathological mobility/Abnormal mobility- Mobility beyond physiologic, due to loss of tooth support, trauma from occlusion, extension of inflammation.

Treatment – Treating the cause

10. Karala Danta

Irregular shape, size and positioned teeth, Can be due to adenoids, congenital abnormalities, malnutrition, oral unhygienic, recurrent dental disorders and caries. Its Vataja type of vyadhi Treatment – Asadya

Modern correlation- Malocclusion of tooth

MALOCCLUSION OF TOOTH- Irregular alignment of teeth, Plaque control becomes difficult or even impossible due to mal occlusion.

Treatment- Orthodontic therapy

11. Vardhana

Madhavakara mentioned as Khalli vardhana and Vagbhata acharya mentions Adhidantha.

Extra tooth erupt due to vitiation of vata and during eruption associates with severe pain and gets relief after complete eruption.

Treatment- Extra teeth removed and Agnikarma, Krimidanta chikitsa, Vrana chikitsa.

Modern correlation- Supernumerary teeth.

SUPERNUMERARY TEETH- Presence of extra teeth in oral cavity.

Arise from third tooth bud arising from splitting of permanent bud. Most common supernumerary teeth-1. Mesiodens-Between 2 maxillary central incisors. 2. Maxillary distomolar/Forth molar- distal to 3rd molar.3. Maxillary paramolar- interproximally between 1st & 2nd or 2nd & 3rd molars.

Management- extraction if necessary

DISCUSSION

Oral health is recognized as an important aspect of an individual's general health and quality of life. Impairment of oral health diminishes the quality of life. The current global and regional patterns of oral diseases are explicitly associated with living conditions, lifestyles and the utilization of preventive oral health systems. Due to the changing trends of lifestyle and diet patterns, increased risk to poor oral health and hygiene in the community especially in an urban setup is been noted. In general surveillance, oral health is neglected in modern public health. Dental caries is the most common dental health problem which causes the destruction of the hard parts of a tooth by the interaction of bacteria and fermentable carbohydrates.

There is rise in dental caries in India with its prevalence reported to be about 50-60% particularly in lower social economic status. Approximately 2.43 billion people (36% of the population) worldwide, have dental caries in their permanent teeth, nearly 60–90% of children and about 100 % of adults have dental cavities, often leading to pain and discomfort.^[4] The Healthy Status of the Tooth can effectively managed with regular practice of Dinacharya and Nidana parivarjana. Proper oral hygiene Maintainane helps in preventing dental health and other diseases of oral cavity. Early management of dental pathology helps in saving the teeth and its associated structures.

CONCLUSION

Ayurveda, the science of healthful living, emphasizes equally on preventive and curative aspect of diseases. In our classics the value of health has been elucidated by explaining about Dinacharya. Dantaswasthya (oral hygiene) is one among them, which have been further explored in the present clinical practice. Poor oral hygiene is the main cause behind oral disease, which has a great impact on quality of life of an individual. Dinacharya⁵ like Dantadhavana, Jihvanirlekhana, Kavala ,Gandusha, Danta rasayana to be used to avoid dental problems and for maintainance of healthy teeth.

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