

A Critical Analysis of Dentation and Dental Care in Ayurveda

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Abstract

Even though dentistry was not a specialized branch of Ayurveda, it was included in ShalakyTantra (one among the eight branches in Ayurveda). Dentistry concerned with the diagnosis, prevention, and treatment of diseases of the teeth, gums, and related structures of the mouth and including the repair or replacement of defective teeth was explained. Ancient scholars Charaka and Sushruta has not given complete information regarding dentation, but Vagbhata gives useful information about dentation and dental problems, including dentational disorder and its treatment. Acharya Kashyapa is the pioneer of this field. He gives more informative data about formation of teeth, milk tooth and permanent tooth. He also described the dental problems and dentational disorders in detail. Kashyapa enumerates the types of teeth (*Rajadanta*, *Vasta*, *Damstra*, and *Hanavya*.) along with number of milk and permanent tooth as 20 and 32 respectively. Few other authors also give some descriptive material about dentistry but not enough to gives elaborate descriptions. In this article a collection of data regarding dentistry from all Samhitas are done to give a detailed description as per ancient and modern parallels about dentistry. This article also highlights the review about formation of teeth, dental problems and dental care, with scientific analysis of the Ayurveda dental health and its incorporation into modern dental care.

Keywords: Dentistry; Dentation; Type of teeth And Dental Care- Ayurveda

Introduction

Dentation is natural phenomenon beginning from infancy and teeth play an important role in life. Ayurveda is a holistic system of medicine which evolved in India some around 5000 years ago, a system of traditional medicine native to the Indian subcontinent, now practiced in other parts of the world as a form of complementary medicine [1]. The earliest literature on Indian medical practice appeared during the Vedic period in India. The Sushruta Samhita and the Charaka Samhita are its earliest authoritative texts. Even though dentistry was not a specialized branch of Ayurveda, it was included in ShalakyTantra (Branch of Ayurveda concerned with all the disorders occurring above shoulders). In ancient India, problems such as deformities of the oral cavity, plaques and infections could be managed and even cured.

In Ayurvedic texts, Charaka and Sushruta have not given any specific description of dentation, however Sushruta has described fifteen *Dantamula* (gum) disorder and eight dentational diseases [2]. Vagbhata also have mentioned *Danta Roga* (Diseases of teeth) and *Dantmamsa Roga* (Disease of gums) [3]. All these diseases are not specific for childhood but it can occur at any age of man's life period. Kashyapa is the pioneer in this field; different aspects of dentation are dealt in Kashyapa Samhita in separate chapter '*Dantajanmika*'.

Materials and Methods

The materials were collected from the classical Ayurvedic literature, Ayurvedic pediatrics books, magazines and research journals as well as PUBMED, MEDLINE database were used for the search of relevant literature and research papers.

Dantotpatti Prakriya (Physiology of teeth eruption)

This is has been clearly mentioned by Vagbhata. Teeth originated from *Ashti* (Bone) and *Majja* (Bone marrow) *Dhatu*. Since they are of incomplete strength during first four month of life, these teeth fall off and new teeth erupt. Again, there is no re eruption of new teeth in aged because of the inadequacy of these *Dhatu*s [4].

Dantotpatti Kala (Period of dentation)

According to Vagbhata, in a child who may possess long life the tooth eruption will start by eighth month or later, whereas in child who has lesser longevity of life, tooth eruption may start as earlier by fourth month. If tooth eruption occurs even at lesser age due to intolerable pain the child will not achieve complete *Dhatu* development [5]. Alike Vagbhata, Kashyapa also mentioned the feature of tooth eruption with various signs and symptoms in between fourth to eighth month attributing specific signs and symptoms according various months. The teeth insemminated in the fourth month are weak, decay early and will be afflicted with so many diseases, the one which erupts in fifth month are shaky, with morbid sensitivity and get easily afflicted with various diseases, the one that erupts by the sixth month are inverted, dirty, discolored and susceptible to dental carries where as one that erupts in seventh month are with two pocket, spilt, stripped, broken, dry, irregular and protuberant. If the tooth erupts by eighth month these are with best qualities [6] Kashyapa had following concepts regarding dentation [7].

- Total teeth are 32 in number, out of which eight are '*Sakrijjata*' (appears only once in life remain in same form) and remaining are '*Dwijja*' (that which has a rebirth).
- Milk (deciduous teeth) erupts in the same month's corresponding the months of intra uterine life in which the formation begin. The months in which the child cuts its teeth's,

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corresponds to the year in which temporary tooth fall and permanent teeth begins to grow.

- Names of various teeth have been given by Kashyapa. These are: *Rajadanta*, *Vasta*, *Damstra*, and *Hanavya*. The middle two teeth are *Rajadanta* (incisor) and are considered sacred. Teeth by the side of *Rajadanta* are called *Vasta* (canines) and other teeth by the side of it are called *Damstra* (pre-molar). The rest are called *Hanavya* (molar) and named because are helpful in mastication.
- Teeth are erupted earlier in female than in male, because their teeth are distant and soft, while stronger in male. Girls feel fewer problems than boys during teeth eruption.

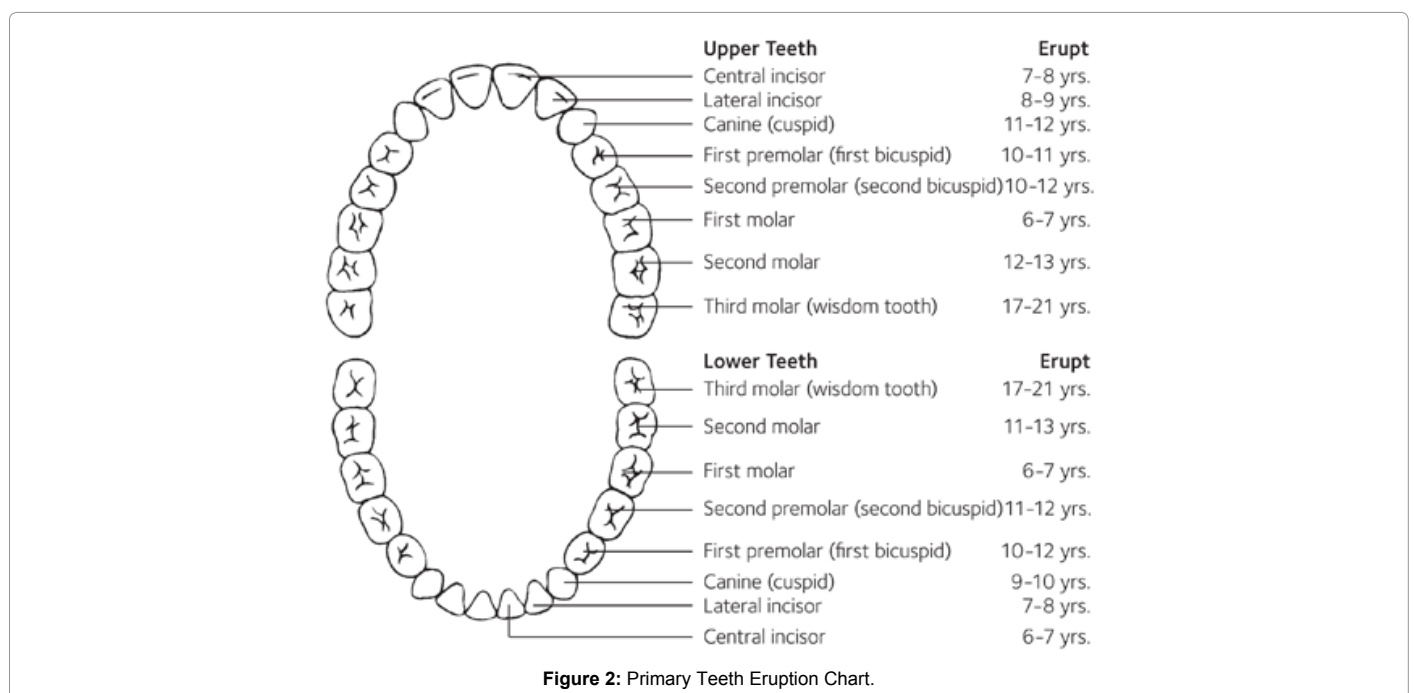
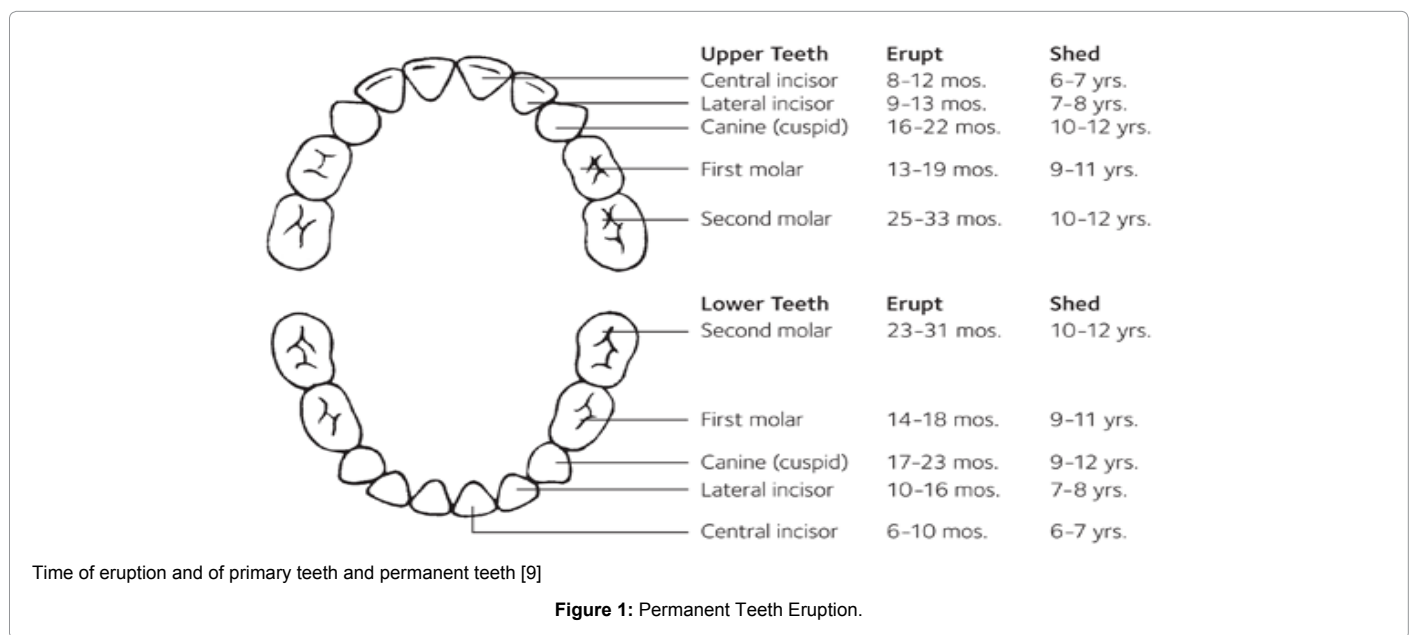
- Formation, eruption, growth and development, fall, strength and weakness all depends on certain factors like, race, nature, maternal and paternal factors (hereditary) and acts of past life.

Vagbhata nation regarding eruption and fall of tooth is similar to Kashyapa. He also opines that cutting of each teeth starts usually before the age of eight months [8].

Time of eruption and shedding of primary teeth's and eruption of permanent teeth, as accepted by modern anatomist and dentists is mentioned in the following (Figures 1 and 2)

Formation and eruption of teeth

In Kashyapa Samhita '*Dantajanmika*' Chapter there is a clue



regarding the description related to origin teeth. According to it, during intra uterine life, some amount of blood is collected in the pits of teeth, this blood by further development take the shape of teeth [9,10] The teeth do not appears again, if broken down by an injury or fallen due to any disease. Vagbhata has given very reasonable answer to it and explained that by the injury, the *Dhatubija* (seeds), responsible for the development of the teeth are destroyed. The nutrition of teeth is also hampered due to injury of blood vessels. The *Dhatubija* (seeds) and blood vessels cannot re originate, hence, development of teeth is affected [11].

The concept of Vagbhata regarding genesis of teeth is more nearer to the current science. He opines that *Dhatubija* (seeds) is basically responsible for further development of tooth. *Dhatubija* (seeds) can be very well considered as tooth buds, localized proliferation of cells in the dental lamina [12]. These buds, which grow into mesenchyme, develop into the deciduous teeth. The first indication of development appears early in the 6th week. The tooth buds for the permanent teeth with deciduous predecessors begin to appear at about ten fetal weeks, from continuation of the dental lamina, and they lie lingual to the deciduous tooth buds. The permanent molar which has no deciduous predecessors develops buds from backward extension of the dental lamina. Tooth development is a continuous process, but it is usually divided into stages bud, cap and bell stages.

Danta Prakara (Types of dentation)

Kashapya has mentioned four typed of dentation [13].

- *Samudga*
- *Samvrita*
- *Vivrita*
- *DantaSampata*

Samudga: *Samudga* means a joint with socket, like a cup. These types of teeth develop in the condition of *Kshaya* (malnutrition) of child. These teeth may fall very frequently.

Samvrita: These are inauspicious and remain dirty.

Vivrita: These types of teeth, cause excessive salivation, because these are not fully covered with lips, there are of many chances causing diseases of teeth.

Danta Sampata: These are auspicious teeth having all the characteristics of healthy teeth.

Time of eruption of teeth and its effects

Kashyapa narrate that if eruption of teeth takes place before the age of 8th month, there are always chances of complication in teeth. Complication of teeth that may appear in various months, are as follows [14], (Table 1).

Vagbhata is also of similar opinion that 8th month is appropriate for eruption of teeth in a healthy child. Children in which teeth erupts before the age of 8th months, He has pointed out another fact that due to excessive pain, causes defective maturation of *Dhatui-Bija* [15].

Vangasena has different concepts regarding the effects of early dentation. According to him, family members of the child are affected, if dentation occurs before the age of 8th months. The child, who has tooth eruption ranging from one to seventh month of age, is considered to be inauspicious for father, mother, siblings and all family members including servant and teacher etc. [16].

There is no any specific cause of premature eruption of teeth which is mentioned in modern literature. However, few have considered that endocrine factors may be involved because premature eruption of teeth sometimes occurs in infant with congenital adrenal hyperplasia. Concepts of ancient scholars have favored this cause of premature eruption of teeth, which is clear from following points. Vangasena was more nearer to modern view point because he states the inauspicious effects of premature tooth eruption among family members. If the cause of early dentation is considered congenital adrenal hyperplasia, then the claim of Vangasena become true since this defect is inherited as an autosomal recessive trait, therefore, can affect other family members too.

Infant born with teeth (*Sadanta shisu*)

Sadanta Shisu means a child born with teeth. In Ancient period, such children were considered inauspicious. Vagbhata has described that in *Sadanta Shisu*, if erupted tooth is in upper jaw, it is inauspicious. Vagbhata has mentioned a procedure to pass off the bad effect of a child born with teeth. For this purpose *Laja* (Parched paddy) and honey is filled in the month of calf and his face is turned toward east. Now child is said to kiss the mouth of calf, three times. Besides this the child is carried on the boat or elephant, after giving a proper bath. *Payasa* (Rice cooked in milk and mixed with honey and *Grita*) should be offered to Brahmins. *Naigmesha Graha* (Type of foreign body whose ill effect can cause infection) is also worshipped for this purpose.

Modern literature considered that presence of teeth at birth may be part of the normal dentation. These teeth are termed as 'Natal Teeth' and observed in approximately one in 2000 newborn infant, usually they are two on the mandibles commonly central incisors. Their attachment is generally limited to the gingival margin, with little root formation or bony supports. Such teeth should not be considered super numeracy unless this is established roentgen graphically. Natal teeth may be prematurely erupted primary teeth which suggest that early dental eruption may be expected. Vangasena is very right in his view that the infants having natal teeth is very dangerous to the mother, because they may produce maternal discomfort due to the abrasion or biting of the nipple during feeding. Presence of natal teeth may also be due to congenital syphilis. Mother suffering from syphilis may transmit her disease to his baby developing in the womb.

Anodontia

Vagbhata has mentioned the physiopathology of agenesis of teeth. He opines that the *Vayu*, situated in gums gets vitiated, either itself or with the help of *Pitta*, dries up *Asthi* (bone) and *Majja* (bone marrow). Because *Asthi* and *Majja* are chief component of teeth, therefore by drying these, there is no eruption of teeth [17]. Vangasena has considered that only *Vayu* is responsible for drying the gums (*Dantavesta*) and ultimately for agenesis of teeth. Seat of this *Vayu* is root of teeth [18].

By drying *Bija* of *Dhatui* (*Asthi* and *Majja*), there is absence of tooth buds. Total Anodontia often occurs with ectodermal dysplasia. Partial Anodontia result when a normal site of initiation is disturbed,

Period	Effect
4 th month	Weak, fall very easily and diseased
5 th month	Loose and diseased
6 th month	Defective in shape, dirty, discolored and affected with caries
7 th month	Cracked having lines, broken dry and forwardly protruding
8 th month	Have all the qualities of a healthy tooth

Table 1: Period of tooth eruption and their effects.

as in the area of palatal cleft, or form genetic failure to code of the formation of specific teeth. The third molar, maxillary lateral incisor and mandibular second premolar are the teeth that most common ones which fail to form.

Ayurvedic procedure for easy dentition

Vagbhata (A.H) mentioned the following recipes for easy and painless eruption of teeth [19].

- Powder of *Pippli* (*Piper longum* Linn.) or *Dhataki Pushpa* (flowers of *Woodfordia frutiosa* Kurz.) and *Amalaki* (*Embllica officinalis* Gaertn) fruits with honey should be rubbed on gums, for easy dentation.
- Application of dry flesh (*Mamsa*) of certain birds like *Batera* (Pleasant) and *Titir* (Partidge) with honey helps appearance of teeth and mouth appears with, teeth like lotus(*Nelumbo nucifera* Gaertn) with pollen.
- Use of *Ghritha* medicated with *Vacha* (*Acorus calamus* Linn.), *Brihati* (both *Solanum indicum* Linn. And *Solanum surattense* Burm.f.), *Patha* (*Cissampelos pareira* Linn.), *Kutaki* (*Picrorhiza kurroa* Royle ex Benth), *Ativisa* (*Aconitum heterophyllum* Wall.), *Motha* (*Cyperus rotundus* Linn.) and drugs of *Jivaniyagana* (Nutrient decoctives).

YogRatnakar [20] and Vangsena [21] have mentioned similar recipe as mentioned by Vagbhata.

Qualities of healthy teeth and gums (*PrasastaDanta* and *Dantabandhana*), defective teeth (*AprasastaDanta*)

Kashyapa has mentioned that healthy teeth should be complete, white, unctuous, smooth, and clean and disease- free with a slight protuberance of upper ones. It should also have evenness, redness, unctuousness and completeness of gums with big, compact and stableness of root. He also mentioned the features of defective dentation. The main features are less or more in number white or black in color with undivided gum [22].

Dentational Disorders and its Pathogenesis

Even the eruption of teeth may also be the cause for many diseases in children, specially such as fever, diarrhea, cough, vomiting, headache, *Abhshandya* (conjunctivitis), *Pothaki* (Pustule on eyelid/style) and *Visarpa* (herpes) [23]. *Asthi* and *Majja Dhatu*s on maturation reach to *Dantasaya* (Tooth socket of jaws and gums) and produce some irritation. The child will feel itching sensation on gums (Due to *Kapha* situated in gums) So, he may bite the breast during sucking, Whatever articles, the child find he bites and presses it against gums to relieve itching and pain. Vitiated *Vayu*, in association of *Kapha* reaches to *Asthi* and *Majja* and spread in whole body, at the same time. *Vayu* itself or with the help of *Pitta*, vitiates other *Dhatu*s and *Malas* (Excretory material) and produces various complications during dentation [24].

As the teeth penetrate the gums, inflammation and sensitivity sometimes occurs, a condition referred to as teething. The child may become irritable and salivation may increase markedly. Bacterial invasion through break in the tissue or under a gingival flap, covering the teeth, may be responsible. A blunt, firm object for the infant to bite usually provides some relief; incision of the gums is seldom indicated. There is no definite evidence to support claim of accompanying temporary systemic disturbance, such as low grade fever, facial rashes and mild diarrhea. However, there may be one possibility that during dentation, due to irritation of gums, children use to bite any object

they find. These objects may be dirty and possibly can transfer various micro-organisms responsible for respiratory, gastro-intestinal and other disorder.

Treatment

In disease caused by the eruption of teeth the child should not be restrained too much (regarding food and other activities) disease caused by eruption of teeth subside even by their own accord after the teeth erupt [25].

General treatment

Ghritha medicated with decoction of *Mangistha* (*Rubia cordifolia* Linn.), *Dhataki pushpa* (Flowers of *Woodfordia frutiosa* Kurz.), *Lodhra* (*Symplocos racemosa* Roxb.), *Kutannata* (*Oroxylum indicum* Vent.), *Bala* (*Sida cordifolia* Linn.), *Atibala* (*Abutilon indicum* Linn.), *Mahasaha* (*Salparni*)(*Desmodium gangeticum* DC.), *Ksudrasaha* (*Mashaparni*)(*Teramnus labialis* Spreng.), *Mudgaparni* (*Phaseolus trilobus* Ait.), *Bilva* (unripped) (*Aegle marmelos* Corr.), fruits of *Karpasa* (*Gossypium herbaccum* Linn.), added with milk and *Mastu* (water of curd) relieves all general complication of dentation [26].

Vagbhata, after describing this recipe, mentioned that this recipe is described by Vriddha Kashapya, however, in Kashapya Samhita there is no description of this recipe. Therefore, it may be possible that Kashapya Samhita, available during the period of Vagbhata might be containing that recipe, which has been missed later on in present available Kashapya Samhita. This recipe is also mentioned in Asthanga Hridaya [27].

Treatment of individual ailments during dentation

It is only Vagbhata [28] who has mentioned detailed description, in his texts Astanga Samgraha regarding management of different disorder appearing during dentation.

Treatment of fever

- Decoction made with *Devadaru* (*Cedrus deodara* (Roxb.) Loud.), *Musta* (*Cyperus rotundus* Linn.), *Madhuyasthi* (*Glycyrrhiza glabra* Linn.), *Majistha* (*Rubia cordifolia* Linn.) and sugar-candy cures *Vatika* fever.
- Decoction of *Bhadradaru* (*Cedrus deodara* (Roxb.)Loud.), *Musta* (*Cyperus rotundus* Linn.), *Madhuyasthi* (*Glycyrrhiza glabra* Linn.) *Vidari* (*Pueraria tuberosa* DC.), *Salaparni* (*Desmodium gangeticum* DC.), *Prasnaparni* (*Uraria picta* Desv.)And *Satavari* (*Asparagus racemosus* Willd) or *Ghritha* medicated with these drugs cure *Vatika Jwara* (fever) .This *Ghritha* may also be used for massage.
- Oils medicated with *Haridra* (*Curcuma longa* Linn.), *Kustha* (*Saussurea lappa* C.B.Clarke), *Vacha* (*Acorus calamus* Linn.), *Satapusp*a (*Anethum sowa* Kurtz.), *Herenu* (*Vitex negundo* Linn.), *Bharangi* (*Eclipta Alba* Hassk.), *Ela* (*Elettaria cardamomum* Maton.), *Susavi* (*Kalaunji* (*Nigella sativa* Linn.), *Rasna* (*Pluchea lanceolata* C.B.Clarke), *Punarnava*, *Tagara* (*Valeriana wallichii* DC.), and *Sarsapa* (*Brassica campestris* Linn. Var. Sarson Prain) should be used for massage.

Treatment of diarrhea, thirst and vomiting

- *Pittaj Jwara* and *Atisara* may be cured by the use of powder of *Laja* (Parched paddy), *Nilakamala* (*Nymphaea stellata* Willd), *Pippali* (*Piper longum* Linn.), *Yasti* (*Glycyrrhiza glabra* Linn.),

Rasanjana (extract of *Berberis aristata* DC.) and sugar with honey.

- Use of decoction of *Laja*, *Pippali* (*Piper longum* Linn.), *Gajapippali* (*Piper chaba* Hunter) with sugar and honey will cure fever, *Atisara* (Diarrhea), thirst and vomiting.
- To get relief from *Amatisara* (Diarrhea with mucus) or *Raktatisara* ((Diarrhea with blood), the powder of *Gajapippali* (*Piper chaba* Hunter) with sugar or powder of *Devadaru* (*Cedrus deodara* (Roxb. Loud.) With sugar should be used.
- Thirst may be relieved by giving boiled and cooled water, medicated with the powder of *Indrayava* (seeds of *Holarrhena antidysenterica* (Linn.) Wall) and *Dadima* (*Punica granatam* Linn.).
- Powder of *Priyangu* (*Callicarpa macrophylla* Vahl.), *Rasanjana* (extract of *Berberis aristata* DC.) and *musta* (*Cyperus rotundus* Linn.) with water of rice and honey is issued to get relief from thirst, diarrhea and vomiting.

Headache

- Anointment of cold *Ghrta* relieves headache.
- Past of leaves of *Kapittha* (*Feronia limonia* Linn.) *Changeri* (*Oxalis corniculata* Linn.), Plum (*Prunus domestica* Linn) and *Kakamachi* (*Solanum nigrum* Linn.) applied to forehead cures headache, vomiting and diarrhea.

Complication of eyes

- *Kukunaka* and *Pothaki* disease should be treated separately; Vagbhata has mentioned only general management of complication of eyes, appearing during dentation.
- Application (in eyes) of a wick prepared with the pieces *Pippali* (*Piper longum* Linn.), *Munja* (*Saccharum munja* Roxb.), and Buds of Jasmines (*Jasminum officinale* Linn. *Forma. Grandiflorum.* (Linn.) Kobuski.), Barley (*Hordeum vulgare* Linn) and leaves of *Nilakamala* (*Nymphaea stellata* Willd) (each 100 in number) cures general complication of eyes.

Fever, diarrhea, cough, anemia (*Pandu*) and disorders caused by mother (*Matrajanya Dosha*)

- Powder of *Patola* (*Trihosanthes dioica* Roxb.), *Nimba* (*Azadirachta indica* A. Juss), *Kutaja* (*Holarrhena antidysenterica* (Linn.) Wall.), *Saptaparna* (*Alstonia Scholaris* R.Br.), *Ajmoda* (*Carum Roxburghianum* (DC) Craib.), *Devadaru* (*Cedrus deodara* (Roxb.)Loud.), *Vidanga* (*Embelia ribes* Burm.f.), *Sarala* (*Pinus roxburghii* Sargent.) with honey and *Ghrta*, is used to cure fever, diarrhea, cough, anemia and disorder caused by mother.

Fever (*Kaphaja*) and skin disorder (*Visarpa*)

- The massage of oil made with the *Sobhanjana* (*Moringa oleifera* Lam.), past made of *Rasana* (*Pluchea lanceolata* C.B.Clarke), *Ela* (*Elettaria cardamomum* Maton.), *Tagara* (*Valeriana wallichii* DC.), *Agnimantha* (sweet) (*Premna mucronata* Roxb.), *Devadaru* (*Cedrus deodara* (Roxb.)Loud.), *Bilva* (*Aegle marmelos* Corr.), *Kushtha* (*Saussurea lappa* C.B.Clarke), *Varuna* (*Crataeva nurvala* Buch-Ham.), *Harenu* (*Vitex negundo* Linn.), *Satpushpa* (*Anethum sowa* Kurtz.) cures fever.
- Rounded eruption, appearing due to vitiation of *Kapha*, can be cured by application of *ghrta*, mixed with urine of elephant.

Diet during dentation: For better dentation, Vagbhata has prescribed that the child should be providing milk and other *Laghu* (light to digest) and *Brumhana* (Nourishing) diet. Milk should not be discontinued suddenly from the diet of children.

Milk is the best source of calcium. The requirement of calcium is increased during dentation. Thus, the milk can fulfill requirement of calcium.

Ayurveda and oro-dental health (Dental care): In Ayurveda, dental health (*Danta Swasthya* in Sanskrit) is held to be very individualistic, varying with each person's constitution (*Prakriti*), and climatic changes resulting from solar, lunar and planetary influences (*Kala-Parinama*). The body constitution is classified based on the predominance of one or more of the three *Doshas*, *Vata*, *Pitta* and *Kapha*. The dominance *Dosha* in both the individual and nature determines health care in Ayurveda, including dental health [29].

Chewing sticks

Ayurveda recommends chewing sticks in the morning as well as after every meal to prevent diseases. Ayurveda insists on the use of herbal brushes, approximately twelve *Angulas* (9 inches) long and the thickness of one's little finger. These herb sticks should be either '*Kashaya*' (astringent), '*Katu* (acid), or '*Tikta*' (bitter) in taste. The method of use is to crush one end, chew it, and eat it slowly [30].

It is recommended that chewing sticks be obtained from fresh stems of specific plants. The *Neem* (*Margosa* or *Azadirachta indica* A. Juss) is a famous herbal chewing stick. The stems should be healthy, soft, without leaves or knots and taken from a healthy tree. Chewing on these stems is believed to cause attrition and leveling of biting surfaces, facilitate salivary secretion and, possibly, help in plaque control, while some stems have an anti-bacterial action. With reference to the individual's constitution and dominant *Dosha*, it is stated that people with the *Vata Dosha* dominance may develop atrophic and receding gums, and are recommended to use chewing sticks with bitter-sweet or astringent tastes, such as liquorice (*Glycyrrhiza glabra* Linn) and black catechu or the cutch tree (*Acacia Catechu* Willd.), respectively [31]. *Pitta Dosha* dominant individuals are recommended to use chewing sticks with a bitter taste such as the twigs from the margosa tree (*Azadirachta indica* A. Juss) and the *Arjuna* tree (*Terminalia Arjuna* (Roxb.) W & A) Those with the *Kapha Dosha* dominant are likely to have pale and hypertrophic gums and are asked to use chewing sticks with a pungent taste, citing the fever nut (*Caesalipinia crista* Linn.) and the common milkweed plant (*Calotropis procera* (Ait)R.Br.) [32]. Present-day research has shown that all the chewing sticks described in ancient Ayurveda texts (circa 200 BC) have medicinal and anti-cariogenic properties [33].

Oil pulling

Oil pulling, is a procedure that involves swishing oil in the mouth for oral and systemic health benefits. It is mentioned in the Ayurvedic text Charaka Samhita where it is called *Gandusha* [34] Oil pulling has been used extensively as a traditional Indian folk remedy for many years to prevent decay, pyorrhea, gingivitis, odontitis, golossitis, diphtheria, stomatitis, bleeding gums [35], Oil pulling therapy can be done using oils like sunflower oil or sesame oil. Oil pulling is a powerful detoxifying Ayurvedic technique that has recently become very popular as Ayurvedic remedy for many different health ailments. Using this method, surgery or medication could be prevented for a number of chronic illnesses. The oil therapy is preventative as well as curative. The exciting aspect of this healing method is its simplicity.

Ayurveda advises oil gargling to purify the entire system; as it holds that each section of the tongue is connected to different organ such as to the kidneys, lungs, liver, heart, small intestines, stomach, colon, and spine [36].

Discussion and Conclusions

Even though Dentistry in Ayurveda is not a separate branch, it is very well elaborated and explained under the branch of Shalakya tantra. Various ancient seers have put forward their valuable suggestions and finding which can contemplate too many current day scientific explanations and dental practices. Basically the teeth originated from *Ashti* (Bone) and *Majja* (Bone marrow) *Dhatu*. Tooth eruption occurring even at lesser age with intolerable pain in the child may be due to incomplete *dhatu* development. Vagbhata and Kashyapa mentioned the features of tooth eruption with various signs and symptoms in between fourth to eight month and which are weak and may be afflicted with so many diseases etc. Total teeth are 32 in number and names of various teeth have been given by Kashyapa. The middle two teeth are *Rajadanta* (incisors) and are considered sacred. Teeth by the side of *Rajadanta* are called *Vasta* (canines) and other teeth by the side of it are called *Damstra* (pre-molar). The rest are called *Hanavya* (molar) and named because are helpful in mastication. Formation, eruption, growth and development, fall, their strength and weakness all depends on certain factors like race, nature, maternal and paternal factors (hereditary) and acts of past life. Time of eruption and shedding of primary teeth's and eruption of permanent teeth given Vagbhata and Kashyapa is similar as modern anatomist and dentists. The concept of Vagbhata regarding genesis of teeth is more precise to the current science. He opines that *Dhatubija* is basically responsible for further development of tooth. Tooth development is a continuous process, but it is usually divided into stages bud, cap and bell stages. Complication of tooth appearing in different months is described by Kashyapa and he told eruption of teeth in 8th month will have all the qualities of a healthy tooth. *Sadanta Shisu* means a child born with teeth. Modern literature considered that presence of teeth at birth may be part of the normal dentation these teeth are termed as 'Natal Teeth' and observed in approximately one in 2000 newborn infants. Presence of natal teeth may also be due to congenital syphilis. Infants having natal teeth produce maternal discomfort due to the abrasion or biting of the nipple during feeding quoted by Vangasena. Anodontia is also described by Vagbhata he opines that the *Vayu*, situated in gums gets vitiated, either by itself or with the help of *Pitta*, dries up *Asthi* and *Majja*. Because *Asthi* and *Majja* are chief component of teeth, therefore, by drying these, there is no eruption of teeth. Vangasena has considered that only *Vayu* is responsible for drying the gums. Vagbhata (A.H) mentioned the recipes for easy and painless eruption of teeth (detail as above); similarly Yogratanakar and Vangasena also described these recipes. Kashyapa has mentioned that healthy teeth will have completeness, whiteness, unctuousness, smoothness, cleanliness, in a disease-free state with a slight protuberance of upper ones. Evenness, redness, unctuousness and completeness of gums with big, compact and stableness of root are the best qualities of teeth. Even the eruption of teeth also becomes a cause for few diseases in children like fever, diarrhea, cough, vomiting, headache, *Abhishandya* (conjunctivitis) *Pothaki* (pustle on eyelid/stye) and *Visarpa* (herpes). In those diseases caused by the eruption of teeth they may subside even by their own accord after the tooth erupt, but a general treatment was given to child according to disease. Ayurveda recommends chewing sticks in the morning as well as after every meal to prevent diseases. These herb sticks should be astringent, acrid, or bitter in taste, used to crush

one end, chew it, and eat it slowly. It is recommended that chewing sticks be obtained from fresh stems of specific plants. Chewing on these stems is believed to cause attrition and leveling of biting surfaces, facilitate salivary secretion and, possibly, help in plaque control. Also there is explanation about oil pulling as a preventive oral care which is commonly mentioned among Ayurvedic classics, which are proved to be very scientific among current researches.

From the study it could be concluded that Kashyapa Samhita gives the detailed description on various aspects of dentation and tooth eruption. Its description is very nearer to modern parallels, Vagbhata has also given some valuable information to subjects like, development of teeth, pathogenesis and management of various ailments appearing during tooth eruption. Vangasena has also given few ideas related to same; however contribution of other ancient scholars in the subject is nominal. Ayurvedic aspect of dental care is very useful in present life, both in preventive and curative aspects on a natural herbal basis. Ancient ideas on tooth eruption and its influence according to various months are subjects that have to be thoroughly researched for more scientific knowledge. Types of teeth and significance of them along with non-occurrence of teeth are all valuable information that is explained in Ayurvedic classics. Ayurveda provides a lot of information in preventive oral care too, Chewing a medicinal stick is near to brushing teeth, because it is healthy and benefits from prevention of oral diseases in comparison to chemical tooth pasted that we use twice a day. Oil pulling is an Ayurvedic technique that has recently become very popular as an Ayurvedic remedy for many different health ailments. Even though a detail and elaborate description is there in Ayurveda regarding the various dental, gum and other oral cavity disorders and its specific treatment, in the current review the authors have tried to collect maximum information regarding the tooth eruption and disorders associated with it in early childhood highlighting certain preventive aspects of Ayurvedic dental care in accordance with modern parallel science to bring in scientific basis of ancient explanations.

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