



Sage Kashyapa - Master of Dental Anatomy and Embryology

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K.Chandrasekharan Nair., et al.**Abstract**

Kashyap Samhita, an ancient classic ayurvedic text mainly deals with the care of children, their diseases and treatment. It also elaborates child nutrition, development, psychology and ideal physical and mental characteristics. It is undoubtedly the most authoritative text of Kaumarabhritya (Paediatrics). 20th chapter of suthrasthana of Kashyapa Samhita, deals with tooth eruption (Danta janmikam). This is the only source book on embryology of teeth in Ayurveda which would have been in greater depths, if we had the text in its complete original form.

Keywords: Kashyapa; Kashyapa Samhita; Kaumarabhrityam; Danta Janmikam; Vriddha Jivakiya Thantram**Introduction**

Kashyapa is a vedic sage who is described as a member of the group of legendary Sapta rishis (seven rishis). Sapta rishis are referred to in the Vedas with utmost reverence. Kashyapa has sung the hymn in praise of Soma in Rig Veda. Sage Kashyapa received Ayurvedic knowledge from Indra, the King of Gods. He mainly focused on *Kaumarabhritya* (paediatrics including Obstetrics and Gynaecology). As per most scriptures, Rishi Kashyapa was the son of Marichi and Kala (Table 1).

Once Sage Kashyapa went on a pilgrimage to the northern borders of India, an area with enchanting mountains, beautiful valleys and lakes. Upon his arrival, the Nagas who resided there, approached him and requested him to rescue them from a demon

No	Name of branch	English equivalent
1	Kaya Chikitsa	Medicine
2	Shalya Tantra	Surgery
3	Shalakya Tantra	ENT and Ophthalmology
4	<i>Kaumarabhritya</i>	<i>Paediatrics, obstetrics, gynaecology</i>
5	Agada Tantra	Toxicology
6	Bhut Vidya	Psychiatry
7	Rasayan	Rejuvenation therapy and geriatrics
8	Vajikaran	Sexology

Table 1: Branches of Ayurveda.

called 'Jalodhbhava' (water borne) who was tormenting the beings who resided on the slopes of the mountains and hid beneath the waters of a lake. So, in order to seek divine intervention, the sage performed intense austerities and meditated upon Lord Vishnu. Vishnu pierced through the mountains, broke open the lake and the water in was drained out and subsequently the demon was killed by Vishnu. Relieved of the demon, a beautiful valley emerged which was named 'Kashyap Mar', the abode of Kashyapa. In due course of time, the valley came to be known as 'Kashmir'. In Sanskrit, Kashmir means 'desiccated from water' ("ka" - water and "shimeera" - desiccate). Puranas consider Kashyapa as the father of Devas, Asuras, Nagas and all of the humanity (Figure 1) (Table 2). Interestingly, Lord Vishnu's avatar of Vamana was born to Sage Kashyapa. The avatar is famous for defeating the popular Asura king, Mahabali, whose yearly visit is celebrated as Onam in Kerala [1,2].



Figure 1: Sage Kashyapa (http://www.andhrabrahmin.ap.gov.in/bwc/faq_kas.aspx)

Name of Kashyapa's wives	Off Springs
Aditi	Agni, Aditya, Vamana
Diti	Hiranya Kashipu, Hiranyaksha, Simhika and Maya
Vinatha	Garuda, Aruna
Kadru	Nagas, Vasuki
Danu	Danavas
Muni	Apsaras

Table 2: Lineage from Sage Kashyapa [8].

History of Kashyapa Samhita

Kashyapa Samhita which is also known as *Vridhdha Jivakiya Tantra* is the only surviving classical text on *Kaumarbhritya* (Pediatrics). It is estimated to be originated in the 6th century BC. It is a compilation based on the teachings of Acharya Kashyap by *Vridhdha Jivaka*. Later in the 7th century AD, Acharya Vatsya redacted the text. In ancient India Kaumarabhritya was a well-developed speciality and references can be found in Kalidasa and Kautilya. Many of the ayurvedic classics on pediatrics were lost in the past. However, tadapatra (leaf) manuscript of Kasyapa Samhita was recovered in part from Nepal by Pt. Hemraj Sharma in 1938 and later it was published by Choukhamba Sanskrit Sansthan, Varanasi in the year 1951. Presently available text is only a small portion of the original text. The text starts with page 29 and ends with page 264. In between also many lines are missing (Figure 2).



Figure 2: Kashyapa Samhita (Exoticindiaart.com)

Kashyap samhita is divided into eight sections viz. sutra, nidana, vimana, shareer, indriya, chikitsa, siddhi and kalpa. Later, Khila sthana was added probably by Vatsya which is disputed. The Samhita has in total 200 chapters of which 78 chapters are available now. In the 20th chapter of suthrasthana, the subject dealt with is tooth eruption (Danta janmikam) (Table 3) [3].

Sl. No	Sections	No. of chapters
1	Sutra sthan	30
2	Nidana sthan	8
3	Vimana sthan	8
4	Shareera sthan	8
5	Indriya sthan	12
6	Chikitsa sthan	30
7	Siddhi sthan	12
8	Kalpa sthan	12
9	Khil sthan	80

Table 3: Parts of Kashyapa Samhita.

Development of teeth

Baby’s teeth (deciduous teeth) start developing during the intrauterine life. At 6 weeks into pregnancy, baby tooth buds start to form. When the baby is born, 20 deciduous teeth might have already developed under the gums and the first teeth erupt when the child reaches 6 to 12 months (Figure 3).



Figure 3: Tooth buds in infants (En.wikipedia.org)

In the section of danta janmikam, Kashyapa has made some interesting observations

“Human beings have 32 teeth of which eight teeth erupt only once. 24 teeth erupt two times. If the germination takes place at the 6th month of the intrauterine life, it erupts when the child attains 6 months after birth and it takes 6 days to appear fully in the mouth. The teeth which erupt at 6 months will shed at 6 years.”

The total number of teeth is correct but only 20 teeth get replaced. Only 20 deciduous teeth are formed by 3 years. The first molar of permanent dentition erupts at 6 years and functions along with deciduous teeth. Probably Kashyapa included the first molar in the deciduous group and stated that 24 teeth erupt twice. Teeth erupting at 6 months will shed at 6 years is an interesting observation. However, this holds good only for the incisors (Table 4).

If the child is born with ‘natal teeth’, Kashyapa considers it as inauspicious. If teeth erupt before 8 months, they will be structurally weak, discoloured and get easily destroyed. Eruption of maxillary deciduous teeth first, abnormal diastema between them, increase and decrease in the total number of deciduous teeth are considered abnormal and inauspicious. The Indian custom of ‘Annprasana’ (cooked rice feeding for the first time) is usually done at 6th month after birth. Kashyapa has recommended it at 10th month probably because of the teeth attaining more fitness to chew cereals.

Tooth	Time of eruption	Time of shedding
Maxillary Teeth		
Central incisor	8-12 months	6-7 years
Lateral incisor	9-13 months	7-8 years
Mandibular Teeth		
Central incisor	6-10 months	6-7 years
Lateral incisor	10-16 months	7-8 years

Table 4: Relation between eruption and shedding of deciduous teeth.

Tooth eruption in girls is faster when compared to that in boys. Teething trouble is more prominent in boys characterised by fever, pain, diarrhoea, conjunctivitis, skin rashes, dyspnoea, cough and headache [4].

Criteria for healthy teeth (Figure 4)



Figure 4: Teeth with good qualities (<https://www.smilecolumbia.com/blog/basic-principles-of-smile>).

Healthy and normal teeth are considered as an asset and hence designated as ‘dantasampat’. Kashyapa has postulated the characteristics of healthy dentition as follows

- Poornata: Presence of all the teeth; 32 in number
- Samata: Symmetric in alignment
- Ghanata: Thickness or hardness
- Shuklata: Pearly white
- Snigdhatta: Lustre/shining
- Slakshnata: Smooth surfaced
- Nirmalata: Cleanliness/neatness
- Niramayata: Without any disease
- Kinchid utharonnatha: Slight forward position of maxillary anteriors

- Rakthata: Slight reddish hue indicating vitality
- Bruhat sthiramoolatha: Stout strong roots
- Danta bandhan samatha: Symmetric gingival borders [5].

Kashyapa has attributed auspiciousness to maxillary central incisors and assigned the status of a king to them amongst the dentition and hence the name 'Raja dantha'. Discoloured, fractured and abraded central incisors are considered inauspicious and such persons are avoided from attending public and auspicious functions. Lateral incisors are called 'Vastha' and canines are known as 'Damshttra'. Other teeth are named as 'Haanavya' because they are deeply rooted to jawbone (Hanu) [6,7].

Conclusions

Kashyap Samhita is the only classic ayurvedic text which has dealt with proper timing of teething, qualities of ideal teeth and gums, names and number of teeth. This text mainly deals with Paediatrics (Kaumarabhrithya). Kashyapa Samhita belongs to 6th century BC and it is in the form of reporting by his disciple, Vriddha Jivaka who was a renowned physician to Buddha and King Bimbisara. The text was revised and edited in the 7th century AD by Vatsya. It is believed that Vatsa has made significant additions to the original text. With time, major portions of the text were lost otherwise we would have got a masterly textbook on paediatrics and paediatric dentistry.

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