



SANDHI SHARIR IN AYURVEDA AND APPLIED ANATOMY IN KNEE JOINT

Dr. Sunil Dutt Dwivedi

Assit.professor Sharir Rachana Department Major Sd Singh P.g. Ayurvedic Medical College And Hospital

Dr. Rashmi Dwivedi*

PG Scholars Shamhinta Siddhant Department *Corresponding Author

ABSTRACT In Ayurvedic Classics Atreya, Dhanvantari Sushruta and all other communities have made it important the knowledge of body to have undoubtedly for the sake of knowledge. The definition of Sandhi in various Ayurvedic literature are given as "asthi samyoga sthaana" or "to unite" or "the meeting point of two or more structures. counted so only Asthi Sandhi or bony joints should be considered under the term Sandhis. In our Ayurvedic literature different Acharyas have mentioned different numbers of Sandhi. According to Acharya Sushruta Sandhis are two hundred and ten in number, which are responsible for various movements, and are distributed throughout the body. In Ayurvedic Samhitas the description of anatomy of Sandhi in detail is not found. It is observed that the incidence of joints disorders are increasing in today's world. It is the burning problem for people and society. A thorough knowledge of the structure and function of the joint is required to diagnose and treat the diseases of joints.

KEYWORDS : Sandhi, Asthi Samyoga, To Unite

INTRODUCTION

In Ayurvedic classics like Charaka Samhita, Sushruta Samhita etc. a huge knowledge regarding Shareer. Nidana and Chikitsa are available. For an expert Vaidya to treat a disease thorough knowledge about the disease and Shareer of its related part is very mandatory. One who knows Shareer (i.e. anatomy and physiology of human body) in detail, only he can know and understand Ayurveda which can bring happiness to the universe.

AYURVEDIC REVIEW

According to Acharya Sushruta only Asthi Sandhi should be taken into account where as other Sandhi of Snayu, peshi and Sira are innumerable and should be excluded while counting.

Classification of Sandhi- Main classification is of two types.

1. Kriyanusar (Based on Kriya) 2. Rachananusar (Based on Rachana)

1. Kriyanusar Vargeekaran (Based on Movement):

The Sandhis are of two types.

- **Chal (Cheshtayukta Sandhi) Diarthrosis**
- **Achal (Sthira Sandhi) Synarthrosis**

The Sandhis which are situated in the Shakhas, Kati and Hanu are Cheshtayukta Sandhi while all the remaining Sandhi comes under the Sthira in nature.

The Cheshtayukta Sandhis are further classified into two types based on their extent of movement.

They are-

- Bahu chala (freely movable)
- Alpachala (slightly movable)

The Sandhi of Shakhas, Kati and Hanu are of Bahuchala variety and the Sandhi of Prushtha etc. are Alpachala variety

Rachananusar Sandhi Vargeekaran (Based on structure)

Based on the structure Acharya Sushruta had described 8 types of Sandhi. They are Kora, Ulukhala, Samudga, Pratara, Tunnasevani, Vayastunda, Mandala and Shankhavarta.

Kora Sandhi (Hinge joint)

As per the description of Haranchandra in commentary of Sushruta Samhita, Kapat etc. is taken for Nibandhan of a special device called Kora is known that the Kabja (hinges). The Kora Sandhi is seen in the following region- Anguli (phalangeal), Manibandha (wrist joint), Gulpha (Ankle joint), Janu (Knee joint) and Kurpara (Elbow joint).

Ulukhala Sandhi (Ball and socket joint)

These types of Sandhi look like stone grinder used in the kitchen in olden days that's why it is named so. The Ulukhala variety of joints is

found at Kaksha (Shoulder joint), Vankshana (Hip joint) and Dashana (Teeth).

Samudga Sandhi (Saddle joint)

This variety of Sandhi looks like a box. This variety of Sandhi looks like a box. These Samudga Sandhis are seen at Ansapeeth (Acromioclavicular joint), Guda (Sacrum), Bhaga (Pubis) and Nitamba (Ilium).

Pratara Sandhi (Gliding or plane joint)

According to Dalhana, the articulating surfaces of this variety of joint are flat in nature and floating, supported by cushion and friction is seen in between the articulating surfaces. In Sushruta's opinion of his variety of joints are located at Greeva (Cervical vertebrae), kasherukha (Vertebrae) and Prushthavansa (Thoracic vertebrae).

Tunnasevani Sandhi (Sutures)

The commentator Gananath Sen has opined that articulating surfaces resembles dentate edges which are supported and stuck together or embedded into one other. This type of Sandhi is found at Sirakapala (Skull) and Katikapala (Hipbone-sacrum, coccyx).

Vayastunda Sandhi (Condylar joint)

According to Gananath Sen the Hanu which is situated within Shankhasthi both side of chin and creat T.M.J. (Temporo-Mandibular joint) is considered as Vayastunda Sandhi. Even Sushruta has got similar opinion about Vayastunda Sandhi.

Mandala Sandhi

According to Dalhana the Sandhi, which are oval or round are called as Mandala Sandhi. This type of Sandhi is present in Kantha (Throat), Hrudaya (Heart) and Netra (Eye) Clomnadi (Trachea).

Shankhavarta Sandhi

According to Haranachandra, these are circular in nature which resembles the circles of a snail or Shankha. According to Sushruta they are found in Shrotra (Ear) and Shringataka (Cavernusinus).

Sandhi Sankhya:

According to Acharya Charaka - 200 Sandhi in body. According to Acharya Sushruta - Body comprises 210 Sandhi. Of these sixty-eight are in the four extremities; fifty-nine in the trunk (Koshtha); and eighty-three in the neck and the region above it.

DISCUSSION

In Ayurvedic classics Sandhis have been classified into eight types by taking account of shapes of Sandhis mainly, movement of Sandhi has not been considered whereas in modern science, the classification of Sandhis has been done by taking account of both structure and function (movement).

The location of Shringataka is not clearly described in classics. So on going through the study of Shringataka Marma scholars have Shringataka Marma in nose. So the Sandhi should be present in nose as conchi, which is present as irregular form like Shankhavarta.

CONCLUSION

The various classical texts of Ayurveda have defined Sandhi are meeting place of two or more Asthis. Ayurveda and modern science both are same classification basis on the structural and function. Kora Sandhi can be considered as hinge joint, Ulukhala Sandhi may include ball and socket variety of synovial joint and gomphosis variety of fibrous joint. Ansapeetha, Guda, Bhaga, Nitamba has Samudga Sandhi can be considered as acromioclavicular, sacrococcygeal, pubic symphysis, and sacroiliac joint respectively. In Pratara, Greeva and Prushtavansha may include intvertebral joint. Sutures

as Tunnasevani and Hanu in Vayasatunda may be taken a tempomendibular. Sankhavartha include Shrota and Shringataka can be correlated with cochlea and region of nasal conchae.

REFERENCES

1. Sushruta Samhita, Ayurved Tatv Sandipika with Hindi Vyakhya, Edited by Ambika Datt Shastri, Chaukhambha Publications, Edition,2012.
2. Charaka Samhita of Agnivesa Edited with Vaidyamanorama Hindi Commentary By Prof. Ravi Dutt Tripathi, Acharya Vidhyadhar Shukla, Chaukhambha Publications, Edition,2009.
3. Astanga Sangraha, Edited By Prof. K.R. Srikant Murthy, Chaukhambha Publications, Edition,2009.
4. B.D Chaurasia Textbook of Anatomy vol-III, Edition,2004.
5. Yoga and Yogic chiktsha, Prof. Ramharsh Singh, Chokhamba publication, Varanasi.
6. J. Tortora, Principles of Anatomy and Physiology, Vol. I, Twelfth Edition
7. Madhava Nidana with Madhukosha edited by Yadunandana Upadhyaya, Chaukhambha, Varanasi.
8. Sharangadhara Samhita : Krishnadas Academy, Varanasi, 1985
9. Sharangadhara Samhita, Dipika Tika along with Gudhartha Dipika Tika, Nirnaya Sagar Mumbai – 1853.
10. Bhavaprakasha – Uttarardha, Vidhyotini Tika, Chaukhambha Sanskrit series, Varanasi, 1949.
11. Bhavamishra : Bhavaprakasha edited by Bhramashankar Shastri, Chaukhambha Sanskrit Series, Varanasi (1984).
12. Madhava Nidana with Madhukosha edited by Yadunandana Upadhyaya, Chaukhambha, Varanasi.