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Review Article



Anatomical Aspect of *Snayu*; Ayurveda and Modern Perspectives

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Abstract

In Ayurveda, ligaments described as *Snayu* while tendon described as *Kandra*. Anatomically the muscle, ligament and tendon represent extra-articular apparatus. *Snayu* as structure of human body posses close relation to the *Sandhi*. *Snayu* as bunches of fibres helps to maintain body posture and impart weight wearing capacity. *Acharya Sushruta* referred working of *Snayu* as like binding plates of boats that allows boat to bear the weight. *Snayu* itself mean to bind, it helps to bind joints together and its fibrous nature provides flexibility. As anatomical structure *Snayu* having physiological importance but also suffered by pathological problems. There are some diseases described in Ayurveda related to the impairment of *Snayu* possessing symptoms of pain, stiffness and swelling, etc. *Snayu Sharira* needs to be understood in details to explore its physiological, anatomical and pathological aspects. Present article explain Ayurveda and modern view on *Snayu Sharira*.

Keywords: Anatomy, *Snayu*, *Sandhi*, Joints, Ligaments.

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1. Introduction

The human body's structural framework is the outcome of an extremely intricate assembly of several parts. Due to the structural differences among these components, they all work well together. They are all connected in such a way that they can provide the bodily parts a clear shape and allow for easy mobility. Their injury could cause a structural deformity and a partial or

total loss of function. Ayurveda described many important parts of body and *Snayu* is one of them. In *Sharir Sthan*, *Acharaya Sushruta* outlined the *Snayu*'s anatomical makeup and functional significance. He stated that it is quite similar to *Shan*, *Kshaum*, and other materials like fibres and horse tail hair. There are approximately 900 *Snayu* in human bodies which are closely related to *Sandhi*. The different types of *Snayu* are depicted in **Figure 1. (1-2)**

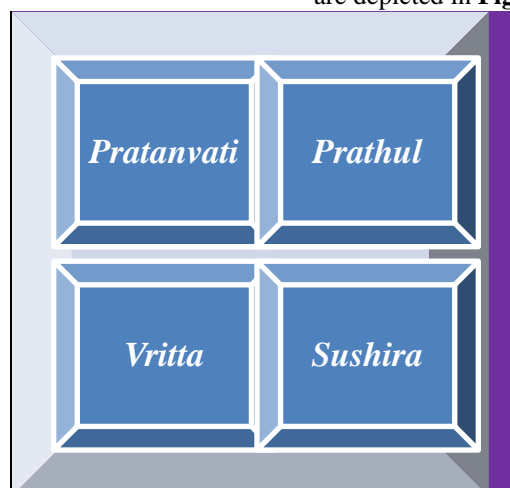


Figure 1. Different types of *Snayu*

The word root (*Dhatu*) "*Sna*" is used to create the term "*Snayu*." The term *Snayu* is formed by *Pratyaya*. *Pratanvati*, *Prathul*, *Vritta* and *Sushira* are different types of *Snayu* on the basis of their structural characteristics.

It is stated that *Snayu* is a structure that holds the *Anga-Pratyanga Sandhi* together. *Amarkosh* claims that *Maha Snayu* is referred to as a *Kandara*. *Acharya Dalhana* gave a very detailed structural explanation of how *Snayu* is *Shanakaar*. *Acharya Sharngadhara* mentioned *Snayu* as a structure that holds *Mamsa*, *Asthi*, and *Medas* together to support the body.

Snayu and *Sira* are structures in the body made from food's essential components. Since the *Mamsa*, *Asthi*, and *Meda* are more powerful than *Sira*, *Snayu* may bind them powerfully, as well as the joints. *Snayu* is created from the unctuous part of *Medas*; *Sira* comes from *Mrudu Paaka* and *Snayu* from *Khara Paaka*.

Asthi, *Snayu*, and *Sandhi* make up the essence of *Meda*, whereas *Sveda* makes up its trash. As *Mastulunga*, *Snayu Kashyapa Samhita* claims that *Moola Snayu* is *Mastulunga's Moolasthan*. *Sushruta Samhita* describes *Mastulunga* as a kind of *Medas*. (3, 4)

2. Sankhya

There are nine hundred *Snayus*, according to *Sushruta*; of these, six hundred are *Shakhas*, two hundred and thirty are *Koshths*, and seventy are *Grivas* and above. Six of these are present in each of the foot's fingers, making a total of thirty; the same number is present in *Pada Tala*, *Pada Kurca*, and *Gulpha*; the same number is present in *Jangha*; ten are present in *Janu*, forty are present in *Uru*, and ten are present in *Vankshana*, making a total of one hundred and fifty in one leg.

Nine hundred *Snayu* are characterized in this way: sixty are present in *Kati*, eighty are in *Prustha*, sixty are in the two *Parshvas*, thirty are in *Ura*, thirty-six are in *Griva*, and thirty-four are in *Murdha*. Some are present in *Urdhavajatrugata Bhaga*, 230 are located in *Madhyasharir*, and 600 are present in *Shakha*. (4-7)

3. Distribution

Shakha and *Sarva Sandhi* both have *Pratanvati* (stretched out / broad). Experts refer to *Vrutta* as *Kandara*. *Parshva*, *Uras*, *Prustha* and *Shir* all have *Prathu*. The terminal portions of the *Amashaya*, *Pakvashaya* and *Basti* all include hollow, ring-like structures called *Sushira*. *Snayuarma* refers to the rough, increasingly thick and extremely white muscles found on the sclera. (8)

4. Function of Snayu

The human body will be able to support weight as long as the joints are secured tightly by *Snayu* in numerous ways, much as a boat made of wooden planks set side by side becomes capable of bearing weight on water while being guided by a man. *Sushruta* remarked that *Snayu* is like ropes in our bodies when discussing *Snayu Prayojan*. *Snayu* holds the body together so it can support weight, just as the rope holds the wooden boards together.

- *Snayu* secures the joints firmly using a variety of techniques.
- It linked to the ligament since the ligament is likewise firmly fixed to the joints.
- Supports the joint, and transforms the joint into a weight-bearing component of the body.
- *Snayu* support movement and flexibility.

Pratanvati is Sanskrit for tendril, sprout, low-growing, creeping plant, and branching out. It is claimed that *Shakha* and all of *Sandhi* contain them. Therefore, *Snayus* of the *Pratanavati* kind, have branching patterns and resemble creepers, should be present in all joints of the body and in the extremities. Ligaments, which are present in all joints, are the structure that mimics *Pratanavati Snayu*.

Vrutta means round or circular, these bodily structures resemble cords. *Kandara* is how *Acharya Susruta* refers to *Vrutta Snayu*. *Maha Snayu* or *Mahanadi* is the names for *Kandara*. It is a big structure that resembles a cord and is comparable to *Snayu*. A large, circular or cord-like structure should represent a *Kandara*. Tendons and large nerve cords which are both cord-like and resemble tendon, are the human analogues of the *Vrutta Snayu*.

The meaning of *Pruthula* in *Snayu* is broad, huge, or great. Therefore, these should be large, flat, and resembling *Pruthula Snayu* structures in human bodies..

Sushira Snayu is located in the outlying areas of places like *Amashaya*, *Pakvashaya*, *Basti*, etc. In other words, these are structures that resemble porous material and are present in the apertures of hollow organs as well as holding those hollow organs (viscera). Sphincters and visceral ligament are the structures that resemble *Sushira Snayu*. (9)

Snayu Marma:

Aani, *Vitap*, *Kakshadhar*, *Kurcha*, *Kurchashir*, *Basti*, *Kshipra*, *Amsa*, *Vidhur* and *Utkshepa*.

Snayu vikara

Acharya Charak mentioned that *Snayu* may get affected by *Stambha*, *Samkocho*, *Khalli*, *Granthi*, *Sphurana* and *Supti*. Aggravated *Vata* in *Snayu* produces *Bahyayama*, *Antarayama*, *Khalli* and *Kubjata*. Aggravated *Vata* also leads many disturbances in *Snayu* including *Stambha*, *Kampa*, *Shula* and *Akshepana*. (10)

5. Treatment of Snayu vikara:

- *Sneha*
- *Upanaha*
- *Agnikarma*
- *Bandhan*
- *Mardan*

6. Conclusion

The ligaments are *Snayu* as per Ayurveda, fundamentally modified forms of fibrous structures. Similar to Shan or Hemp fibres, these fibres are organized in bundles. *Snayu* serves the purpose of binding and provide support to the joints. Similar to how ligaments support internal organs and hold bones together during joint articulation, they also support body

weight and ensure good posture. *Snayu* is crucial in the development of the body's framework since it connects different structural elements. *Pratanvati*, *Prathul*, *Vritta* and *Sushira* are different types of *Snayu*. Impairment of *Snayu* may leads symptoms of pain, stiffness and swelling, etc. Ayurveda described various therapies for treating *Snayu vikara* these therapies includes *Sneha*, *Upanaha*, *Agnikarma*, *Bandhan* and *Mardan*, etc. Functionally *Snayu* supports joint and provides weight-bearing capacity to the body.

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Conflict of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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