



**BRIEF REVIEW ON CONCEPTS OF SNAYU DESCRIBED IN AYURVEDA AND ITS UTILITY IN PRESENT MORDEN ERA**

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**ABSTRACT**

Acharya Sushruta has separately explained the anatomical aspects like Sira, Dhamni, Marma, Kandara, Snayu etc. Snayu is one such structure present in human body in close relation to Sandhi. It refers to a band of fibres and helps to maintain body posture by providing weight carrying capacity. The various Acharyas of Ayurveda have been described about Snayu but even it is not sufficient to understand the anatomy of Snayu in present perspective because their whole study was limited only to number and division of Snayu. Acharya Sushruta compares the function of Snayu with binding plates of boats, which allows the boat to bear the weight and float easily in the deep water. There are described few disease in Ayurveda impairment of Snayu symptoms are severe pain, stiffness, swelling etc. now present era is required here to reveal the structure doubt of Snayu.

**KEYWORDS:** Snayu, Sandhi, band, binding, weight bear.

**INTRODUCTION**

The structural framework of a human body is result of very complex assembling of several components. These all components have great co-ordination among themselves with their structural distinction. They all are bounded together in such a way that they could provide a definite shape and comfortable movement to the body parts. Their injury may result partial or complete loss of function along with the structural deformity. Snayu is one of them. Acharaya Sushruta has described the anatomy and functional importance of Snayu in Sharir Sthan. He has mentioned that it is very close with Shan, Kshaum, horse tail hairs, fibers etc. These are total 900 in numbers. Snayu are present in human body in close relation to Sandhi. On the basis of their structural characteristics they can broadly divided in to four types, Pratanvati, Prathul, Vritta, and Sushira.

Acharya Sushruta compared the function of Snayu with the binding plates of boats, which allows the boat to bear the weight of boat and float easily in the deep water. Most of the structural entities explained in our Samhitas are very difficult to understand. But it is very important to exactly interpret the anatomical terms with reference to Samhita. Snayu is one such structure which requires detailed study. So this is our sincere effort.

**Ayurved Literature**

According to Sanskrit dictionary the word snayu means to bind. Garbhpnishad has mentioned that Snayu are 900 in number. In the chain of Dhātu nutrition Snayu is developed from Meda and Asthi. Acharya Sushruta has given the complete account including its total number, division, types and applied anatomy of Snayu. He has described the word Snayu and its clinical importance in anatomy while describing that what is to be done and what is not to be done during performing surgery.

According to Acharya Sushruta, Snayu is Shanakara. It is rope like structure which help to bind the joints and maintain the body posture by providing weight carrying capacity. He has mentioned Snayu as a type of Marma and also given detail account about the clinical features of Snayu Viddha. Only Acharya Sushruta has considered the Snayu as suturing material while describing the Seevan Karma. In present time it is highly applicable for approximation of internal wound being as absorbable suturing material. According to Acharya Sharangdhara Snayu is the Structure which support the by binding Mamsa, Asthi and Medas. Acharaya Charak has stated in Sharir Sthan that total no. of Snayu in human body is 900.

Acharya Charak has described only about the no. of Snayu, he did not mentioned the types of Snayu. He has mentioned the Snayu as Jangam Dravya in the first

chapter of Sutra Sthan. He also supposed Snayu as one of the site for Nasya. While describing the site (sthana) of various Roga Acharya Charak has accepted Snayu as one of the site among Madhyam Roga Marga along with Kandara, Asthi, Sandhi. Acharya Charaka said that the Snayu is the Updhatu of Meda Dhatu. Snayu is Pitruja Bhava. According to Acharya Sharangdhar the Snayu are supposed to be as binding material used for the binding of Mamsa, Meada and Asthi.

Acharya Dalhana has mentioned Kandara as Mahasnayu. He comments only about Vritta Snayu. Vritta Snayu as Virtul Snayu. In Parishyadya Shariram the word Sandhibandhana, Vatanadi, Kandara are mentioned for Snayu. Acharya Bhavaprakasha said that flexion and extension are the function of large Snayu and known as Kandara.

Embryological development of Snayu: - from the unctuous portion of Meda, Sira (blood vessels) and Snayu are formed. Development of Sira occurs when subjected to mild heat and that of Snayu occurs when subjected to more heat.

Division of Snayu:- of these 600 present in Shakha 230 present in Madhyasharir 70 - present in Urdhavajatrugata bhaga.

Classification of Snayu: - Depending upon the shape and location Snayu are classified into four types.

1. Pratanavati Snayu: - these are present in all Shakha (extremities) and Sandhi (joints).
2. Vrutta: - these are circular in shape and are known as Kandara. According to Acharya Bhavaprakash large snayu are called as Kandara. These are also present in Shakha and Sandhi.
3. Sushira Snayu: - These are porous in nature and are found at the ends of Amashya (stomach), Pakwashaya (large intestine) and Basti(urinary bladder).
4. These are present in Parshva (flanks), Ura(chest), Prushtha (back) and Shir (head)

### Modern Literature

On the basis of anatomical structure, Aumetions and clinical symptoms the term Snayu is very close to ligament/tendon/aponeuroses/fascia etc, in modern medical sciences. So here a deep study of structure, function and clinical feature of above mentioned term of modern medicine is required to reach some conclusions regarding the term Snayu.

**Tendon-** A microscopic study of anatomical structure of tendon shows that it is a fibrous band of connective tissue serving as a connecting element for the attachment of muscle to the bone and other parts. On the basis of similarities between structure and functions of Vritta Snayu and tendon the Vritta Snayu as mentioned by Acharya Sushrut.

**Ligament-** On the basis of microscopic study it is defined as the fibrous band of some dense regular connective tissue which is arranged in form of parallel bundles and is highly adopted for resisting the strain. The strength of these fibres bundle is termed as ligament. It is one of the principal mechanical factors that hold bones close together in a synovial joint. A ligament is the fibrous connective tissue that connect one bone to other bone and also known as articular ligament fibrous ligament or true ligament. Ligaments are similar to tendons and fasciae as they all are made up of connective tissue. The differences in them are in the connection that they make. Ligaments connect one bone to another bone. Tendons connect muscle to bone. Fasciae connect one muscle to another muscle.

**Aponeurosis-** When a tendon is distributed over a large area, it converted into a broad, thin sheet of connective tissue referred as an aponeurosis. Aponeurosis often has a longitudinally striated appearance, imparted by large fascicles and separated by loose connective tissue. The Prathul Snayu mentioned in Ayurveda can be treated as aponeurosis on the basis of the similarity of structure and function between these two.

**Fascia-** A sheet or band of fibrous connective tissue separating or binding together muscles and organ etc.

### Applied Anatomy

The injury of ligament and tendon produces symptoms like inflammation, swelling, pain along with disturb movement of particular part of body. A severe injury some time may causes partial or complete loss of function.

### DISCUSSION

After going through the literatures concern to the Snayu the following truths are revealed, which I want to discuss here to reach at some conclusions. Sushrut has said that one, who knows Snayu externally as well as internally, can be able to pull the foreign particles (Shalya) out of the human body with safety and without causing any pain. He has said further that the injury of Snayu is more severe than the injury of Mamsa, Sira, Asthi and Sandhi. Which is followed by excessive pain and delayed healing. Sushruta has also mentioned Snayu as suturing material that shows it's one of the significant uses. Snayu are present in close relation to Sandhi and ligament are also near the bony ends and connect them. Marma are the vital points described in Ayurveda. Snayu Marma is the types of Marma characterized by predominance of Snayu and are to be protected from injury. Injury to Snayu Marma may cause severe pain, short stature, delayed healing of wound and even death. It explains importance of Snayu.

### CONCLUSION

From the above discussion it can be concluded that Snayu described in Ayurveda are nothing but the

ligaments. Snayu are basically fibrous structures or their modifications. These fibres are arranged in bundles like Shan or Hemp fibres. The function of Snayu described by Acharya Sushruta as that like the binding plates of boat which bear the weight of boat and float easily in the deep water. Same is the function of ligament which supports the internal organs and holds bone together in articulation at the joints and bear the weight of body and gives proper posture to the body. Snayu plays the key role in formation of framework of the body by binding the various structural components together. It can acts as a one of the best suturing material in approximation of wounds.

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