

RESEARCH ARTICLE

A CONCEPTUAL STUDY OF SNAYU AND ITS ANATOMICAL IDENTIFICATION

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ABSTRACT

Acharya Susrutha in the sharirastana has explained the anatomical consideration and identification of different body parts. He named and enumerated specific structures and their functions and locations in the body. Acharya explained snayu as the structure which binds different body parts together. He also stated that the knowledge of snayu is essential for a surgeon. So identifying and understanding and standardizing the concepts and terminologies related to sharira is an integral part of learning Sharer Rachana.

KEYWORDS: Snayu, ligaments.

INTRODUCTION

Ayurveda, one of the oldest medical sciences has explained the anatomy and physiology of human body in detail. Most of the anatomical structures are explained in Ayurvedic classical textbooks. Snayu is one of those concepts explained by Achryas. Achrya Susrutha has given a detailed description of snayu including its types, number, locations and functions¹. Explanations about snayu are available in various other textbooks like Bhavaprakasha Sharangadhara Samhitha etc. Bandana or binding is considered as the basic function of snayu². It is the one structure which binds the bones and muscles in the body just like a rope. It provides stability to human body by stabilizing the joints³. It also aids in the body movements. Even though samhithas has given description of snayu it is important to understand its anatomical interpretations and clinical relevance.

CONCEPT OF SNAYU

Etymology

The word snayu is derived from the root 'sna' dhatu . 'sna' dhatu when combine with 'un' and 'yuk' prathyaya the word snayu is formed⁴.

Definition of Snayu

Snayu is the structure that binds mamsa asthi and medas in human body⁵ . Snayu is also definid as the upadathu which is spindle shaped and used in bow⁶.

Formation of Snayu

During the process of development , the essence part of the medas undergoes metabolic process – khara pka and forms snayu⁷. Snayu is one of the pithruja bhava⁸.

Number of Snayu

According to Acharya Susrutha snayus are nine hundred in number out of which six hundred in the limbs, two hundred and thirty in the trunk and seventy in the head and neck. Out of this six present in each fingers and all together thirty , thirty in the thala koorch and gupha [in the region of ankle], jangha [leg] thirty, janu [knee] thirty , thirty in the region of thigh and ten in the region of vankshana or loin , making one hundred and fifty in each limb and total six hundred in four limbs.

Sixty in the kati pradesha eighty in the prusta or hip thirty in each parshwa or flanks total sixty, and thirty in uras all together two hundred and thirty in the trunk

Thirty four in the head and thirtysix in the neck all together seventy snayus in the head and neck. Thus the nine hundred snayus in the body are described⁹.

Types of Snayu

Four types of snayu's are described they are Prathanavathi, Vrutha, Sushira And Pruthula. Prathanavathi or the broad snayus are seen in the shakha [extremities] and in sandhi's[joints]. Vrutha sanyu is otherwise known as kandara by experts and are thick and cylindrical in shape. Sushira snayus are seen in the

terminal part of aamashaya [stomach], pakwashaya [large intestine], and vasthi [urinary bladder]. Prudula or the large flat snayu [aponeurosis] are seen in parswa or flanks, uras or chest and in shiras or head¹⁰.

Importance of Snayu

Just like the boat made of wooden planks is wrapped and tied together with ropes become stabilized and capable of carrying weight in water without danger similar way the joints of the body are well articulated and supported by snayu will be able move and capable of bearing weight of the body. An injury to snayu is more harmful and cause disability than an injury to structures like mamsa, asthi, sira and sandhi. Through knowledge of snayu is very important for a surgeon to remove a deep seated foreign body without difficulty¹¹.

Snyayu Marma

Acharya Susruta and vagbhata has explained snayu marma in the structural classification of marma. Marmasthana with the predominance of snayu dathu is considered as snayu marma¹². Twenty seven such marmas are described by Acaryas Susruta and where as twenty three snyayu marma are described by Vagbhata¹³. According to Vagbhata Snayu marma abhighada causes loss of movements, convulsions, contractions, and stiffness along with inability to walk, sit or stand, deformity and severe pain¹⁴.

DISCUSSION

Acarya Dalhana has clearly stated the anatomical identification of snayu as the spindle shaped upathadu which used in bows. Acharya sharangadhara has explained and identified snayu as the stricture which binds the body components like mamsa, asthi, and medas. Snayu is also mentioned among suturing materials by Susruta. He explained four type of snayu ie prathanavathi, the snayu's present in the extremities and joints referring to the ligaments, vrutha snyayu which is also called as kandara and they are round and prominent, referring to the large rounded tendons which attaches muscles to the bone, sushira snayu refers the sphincters present in the urinary bladder and digestive tract, and pritula the large flat aponeurosis present in lateral and posterior part of trunk chest and head. In anatomical explanations of snayu acarya susruta in sharira sthana has mainly considered the connective tissues like ligaments, tendons, and aponeurosis which are having similar basic structure with type I collagen fibers, except sushira snayu. In the context of marma also snayu refers to ligaments and their injury leads to severe pain, postural difficulties and difficulties for movements. But in the context of snyayugatha vikara, susruthas considered snayu as nerve fibers and he explained the diseases of neurological origin may be white solid appearance of nerve fibers contributed to it.

CONCLUSION

From the above discussion it can be concluded that Anatomically snayu is identified as ligaments, tendons and aponeurosis. Ie snayu is the fibrous structure which does binding of body parts and it provides stability to the body. It helps in the movements and maintaining the posture of the body.

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