

Review Article

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A CRITICAL REVIEW ON *KANDARA SHARIR* AND ITS ROLE IN STRUCTURAL STABILITY AND MOVEMENT OF THE HUMAN BODY

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ABSTRACT

Background *Kandara* is an important anatomical structure described in Ayurvedic literature under *Rachana Sharir*. Classical texts explain *Kandara* as strong fibrous structures that connect different body parts and facilitate movement, stability, and maintenance of posture. They are considered specialized forms of *Snayu* and are distributed throughout the body, particularly in the extremities, neck, and trunk. The functional significance of *Kandara* extends to locomotion, transmission of muscular force, maintenance of joint integrity, and support of body structures. Modern anatomy correlates *Kandara* with tendons and certain ligamentous structures that provide mechanical stability and enable coordinated movements. Understanding the concept of *Kandara Sharir* offers valuable insights into musculoskeletal anatomy and helps bridge classical Ayurvedic knowledge with contemporary anatomical sciences. **Aim** To critically review *Kandara Sharir* and evaluate its role in structural stability and movement of the human body. **Objectives** To study the concept of *Kandara* described in Ayurvedic literature. To analyze the anatomical and functional significance of *Kandara*. To correlate *Kandara* with modern anatomical

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structures. To explore its role in maintaining structural stability and body movements. **Material and Methods** Classical Ayurvedic texts including *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, and standard commentaries were reviewed. Relevant modern anatomy and musculoskeletal literature were analyzed. Information was compiled, compared, and critically evaluated. **Results and Discussion** *Kandara* plays a vital role in transmitting muscular force and stabilizing joints during movement. The classical descriptions demonstrate remarkable anatomical accuracy and clinical relevance in understanding locomotor functions. **Conclusion** *Kandara Sharir* represents an important component of Ayurvedic anatomy concerned with body support and movement. Its correlation with tendons and connective tissues highlights the scientific relevance of classical anatomical concepts.

Keywords *Kandara*, *Rachana Sharir*, *Snayu*, Tendon, Structural Stability, Human Movement

INTRODUCTION

Ayurveda describes the human body through a detailed study of anatomical structures collectively known as *Sharir Rachana*. Among these structures, *Kandara* occupies a significant position due to its contribution to body support, stability, and locomotion. Classical Ayurvedic scholars recognized that effective movement requires specialized fibrous structures connecting muscles and bones. These structures were termed *Kandara* and were considered essential for maintaining physical activity.¹

The concept of *Kandara* is mainly described in *Sushruta Samhita* and other classical texts under the discussion of *Snayu*. Ancient anatomists observed that certain fibrous structures possessed greater strength and tensile properties than ordinary tissues and were capable of transmitting force generated by muscles. These observations led to the detailed classification and description of *Kandara* within Ayurvedic anatomy.²

Movement of the body depends upon coordinated action of muscles, joints, bones, tendons, ligaments, and nervous control. Modern anatomy recognizes tendons as structures connecting muscles to bones and facilitating transmission of muscular force. The structural characteristics described for *Kandara* show considerable similarity to these tendinous structures and connective tissue components.³

The study of *Kandara Sharir* is important not only for understanding classical anatomy but also for appreciating the biomechanical principles underlying posture, gait, and locomotion.

A critical review of this concept provides a foundation for integrating Ayurvedic anatomical knowledge with contemporary musculoskeletal sciences.⁴

AIM AND OBJECTIVES

Aim

To critically review *Kandara Sharir* and its role in structural stability and movement of the human body.

Objectives

- To study classical descriptions of *Kandara*.
- To analyze anatomical features of *Kandara*.
- To correlate *Kandara* with modern anatomy.
- To evaluate its contribution to stability and movement.

MATERIALS AND METHODS

The present review study was conducted through a comprehensive analysis of classical Ayurvedic texts including *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, and relevant commentaries. Information regarding *Kandara*, *Snayu*, musculoskeletal structures, and locomotor functions was collected and critically reviewed. Modern anatomy textbooks, peer-reviewed journals, and scientific literature related to tendons, ligaments, connective tissues, biomechanics, and movement physiology were also consulted. The collected information was systematically compiled and compared to establish conceptual and functional correlations.

CONCEPTUAL STUDY

Etymology of *Kandara*

The term *Kandara* refers to strong cord-like fibrous structures present within the body. The word denotes firmness, strength, and the capacity to support movement and stability.⁵

Concept of *Kandara* in Ayurveda

Classical Ayurvedic scholars considered *Kandara* as specialized structures associated with *Snayu*. These structures are responsible for connecting different anatomical components and

facilitating coordinated bodily movements. They serve as stabilizing elements within the musculoskeletal system.⁶

Description in *Sushruta Samhita*

Sushruta provides detailed descriptions of *Snayu* and their various modifications. Among them, *Kandara* is recognized as a stronger fibrous structure extending across joints and limbs. It contributes significantly to movement, support, and maintenance of posture.⁷

Anatomical Distribution of *Kandara*

Classical texts mention that *Kandara* are predominantly distributed in:

- Upper limbs
- Lower limbs
- Neck region
- Back region
- Major joints

Their distribution indicates their direct involvement in locomotor activities.

Structural Characteristics

Kandara possess:

- High tensile strength
- Cord-like appearance
- Flexibility
- Stability
- Resistance to mechanical stress

Relationship with *Snayu*

Kandara are considered specialized forms of *Snayu*. While all *Kandara* may be included within *Snayu*, not all *Snayu* are classified as *Kandara*. The distinction lies in their greater strength and functional specialization.⁸

Functional Importance of *Kandara*⁹

Support Function

They maintain structural integrity of limbs and joints.

Stability Function

They prevent excessive movement and maintain joint alignment.

Locomotor Function

They facilitate coordinated movements during walking, running, and other physical activities.

Force Transmission

They transfer muscular force to skeletal structures.

Postural Maintenance

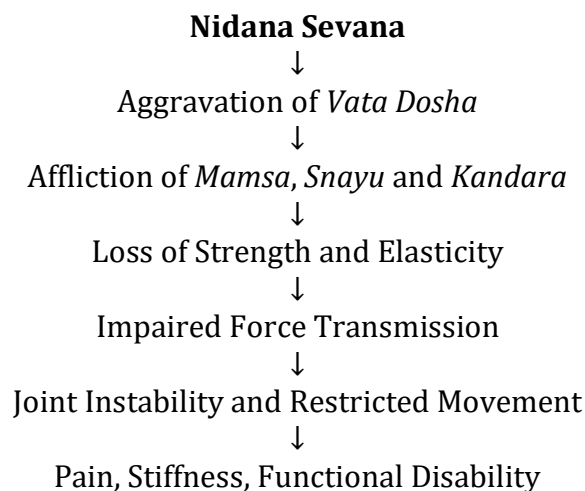
They help preserve body posture against gravitational forces.

Clinical Importance in Ayurveda

Disorders affecting *Kandara* may result in:

- Restricted movements
- Pain
- Joint instability
- Functional disability
- Musculoskeletal deformities

SAMPRAPTI¹⁰



MODERN REVIEW

Tendons

Tendons are dense connective tissue structures connecting muscles to bones. They transmit forces generated during muscle contraction and facilitate skeletal movement.¹¹

Ligaments

Ligaments connect bones to bones and contribute significantly to joint stability. Certain structural and functional similarities exist between ligaments and the Ayurvedic concept of *Kandara*.¹²

Histological Structure

Tendons consist primarily of:

- Type I collagen fibers
- Fibroblasts
- Extracellular matrix
- Elastin fibers

These components provide tensile strength and flexibility.

Biomechanics of Tendons

Tendons function as biological force transmitters. They store and release elastic energy, improve movement efficiency, and reduce muscular workload.¹³

Role in Structural Stability

Tendons and supporting connective tissues:

- Stabilize joints
- Maintain alignment
- Resist abnormal movements
- Preserve posture

Role in Human Movement

They contribute to:

- Walking
- Running

- Jumping
- Lifting
- Fine motor activities

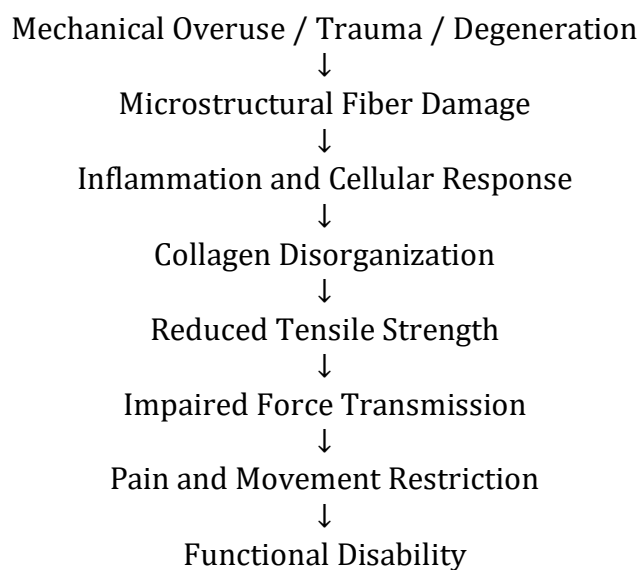
Common Tendon Disorders

- Tendinitis
- Tendinosis
- Tendon rupture
- Tennis elbow
- Rotator cuff injuries
- Achilles tendinopathy

Table no. 1 Correlation of *Kandara* with Modern Anatomy

Ayurvedic Concept	Modern Correlation
<i>Kandara</i>	Tendons
<i>Snayu</i>	Ligaments/Fibrous tissues
Stability function	Joint stabilization
Movement facilitation	Force transmission
Structural support	Musculoskeletal support

PATHOGENESIS



RESULTS AND FINDINGS

- Classical Ayurvedic texts provide detailed descriptions of *Kandara*.
- *Kandara* are anatomically related to *Snayu* structures.
- Their structural features closely resemble tendons.
- They contribute significantly to stability and movement.
- They serve as major force-transmitting structures.
- Their distribution corresponds to locomotor regions.
- Functional similarities exist between *Kandara* and tendons.
- Biomechanical principles described in Ayurveda correlate with modern movement science.
- Tendon disorders provide clinical relevance to the concept of *Kandara*.
- Integration of both systems improves anatomical understanding.

DISCUSSION

The concept of *Kandara* demonstrates the advanced anatomical understanding possessed by ancient Ayurvedic scholars. Their observations regarding strong fibrous structures responsible for movement and stability closely parallel the modern description of tendons. The emphasis placed on these structures highlights the importance of biomechanical principles in classical anatomy.¹⁴

Structural analysis reveals that *Kandara* possess characteristics necessary for transmitting muscular force to skeletal components. Their distribution in the limbs, neck, and trunk further supports their role in locomotion and posture. The descriptions provided by *Sushruta* are remarkably consistent with current anatomical knowledge concerning tendon architecture and function.¹⁵

Modern musculoskeletal science confirms that tendons are essential for efficient movement and joint stability. The close correlation between *Kandara* and tendons suggests that Ayurvedic anatomy was based on careful observation and practical understanding of body

mechanics. Therefore, *Kandara Sharir* remains highly relevant in contemporary anatomical and clinical studies.¹⁶

CONCLUSION

Kandara Sharir constitutes an important component of Ayurvedic anatomical science and plays a crucial role in maintaining structural stability, posture, and coordinated body movements. Classical descriptions portray *Kandara* as strong fibrous structures associated with support and locomotion, closely resembling tendons and related connective tissues described in modern anatomy. The conceptual and functional similarities between Ayurvedic and contemporary perspectives demonstrate the scientific value of classical anatomical knowledge. Understanding *Kandara* provides a meaningful bridge between traditional Ayurvedic anatomy and modern musculoskeletal sciences.

Conflict of Interest - Nil

Source of Support- None

References

1. Sharma PV. Sushruta Samhita of Sushruta, Sharira Sthana. Vol. 1. Varanasi: Chaukhambha Vishvabharati; 2018. p. 74–79.
2. Acharya YT, editor. Sushruta Samhita with Nibandha Sangraha Commentary of Dalhanacharya. Sharira Sthana. Varanasi: Chaukhambha Orientalia; 2019. p. 363–369.
3. Standring S, editor. Gray's Anatomy: The Anatomical Basis of Clinical Practice. 42nd ed. London: Elsevier; 2021. p. 1355–1372.
4. Moore KL, Dalley AF, Agur AMR. Clinically Oriented Anatomy. 9th ed. Philadelphia: Wolters Kluwer; 2023. p. 35–52.
5. Monier-Williams M. A Sanskrit-English Dictionary. Delhi: Motilal Banarsidass; 2016. p. 247.
6. Sharma RK, Dash B. Charaka Samhita. Vol. 2. Varanasi: Chowkhamba Sanskrit Series Office; 2019. p. 438–442.
7. Acharya YT. Sushruta Samhita. Sharira Sthana 5. Varanasi: Chaukhambha Surbharati Prakashan; 2018. p. 381–384.

8. Srikantha Murthy KR. Ashtanga Hridayam of Vagbhata. Vol. 1. Varanasi: Chaukhambha Krishnadas Academy; 2017. p. 397–401.
9. Ghanekar BG. Sushruta Samhita Sharira Sthana. New Delhi: Meharchand Lachhmandas Publications; 2018. p. 210–216.
10. Tripathi B. Ashtanga Hridayam with Nirmala Hindi Commentary. Delhi: Chaukhambha Sanskrit Pratishthan; 2019. p. 124–129.
11. Tortora GJ, Derrickson BH. Principles of Anatomy and Physiology. 16th ed. Hoboken: John Wiley & Sons; 2021. p. 334–339.
12. Drake RL, Vogl W, Mitchell AWM. Gray's Anatomy for Students. 5th ed. Philadelphia: Elsevier; 2024. p. 515–529.
13. Kannus P. Structure of the tendon connective tissue. Scand J Med Sci Sports. 2000;10(6):312–320. doi:10.1034/j.1600-0838.2000.010006312.x.
14. Benjamin M, Kaiser E, Milz S. Structure-function relationships in tendons: a review. J Anat. 2008;212(3):211–228. doi:10.1111/j.1469-7580.2008.00864.x.
15. Sharma AK, Kechele PR. Conceptual study of *Snayu* and *Kandara* in Ayurveda with anatomical correlation. AYU. 2014;35(4):421–425. doi:10.4103/0974-8520.159002.
16. Maffulli N, Longo UG, Denaro V. Novel approaches for the management of tendinopathy. J Bone Joint Surg Am. 2010;92(15):2604–2613. doi:10.2106/JBJS.I.01743.