



SHLESHMASHAYA: THE STRUCTURAL AND FUNCTIONAL EPICENTER OF KAPHA – A PHYSIO-ANATOMICAL PERSPECTIVE

Dr. Abhirama¹, Dr. Uma B Gopal²

¹PG Scholar, Department of Rachana Shareera,

Sri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Hassan

²Professor, Department of Rachana Shareera, Indian Institute of Ayurvedic Medicine and Research, Bengaluru.

ABSTRACT

In Ayurveda, the term *Ashaya* (आशय) denotes a physiological reservoir or abode where *Dosha*, *Dhatu* and *Mala* reside and impart systemic influence. Among these *ashaya*, *Shleshmashaya*, a vital anatomical and physiological entity, serves as the seat of *Kapha* and plays a crucial role in maintaining stability, integrity, bonding, lubrication, and immunity within the body. Though *Shleshmashaya* anatomically localizes to the thoracic region (*Uras*) and forms *ashraya* for *shleshma/kapha*, there are other seats which are quoted as *kapha sthana*. These are other than *Uras*, the *shleshma* is present in *kantha*, *shiras kloma*, *parva*, *amashaya rasa*. Thus there's a need to understand the structural entity of *shleshmashaya* to see whether it should be quoted only for *uras* or other *stana*, wherever *shleshma* is predominantly seen. This article explores its etymology, anatomical correlations, and applied physiological aspects in relation to the five subtypes of *Kapha* – *Shleshaka*, *Kledaka*, *Bodhaka*, *Tarpaka*, and *Avalambaka* and their host site and function in the body. By drawing parallels between Ayurvedic and modern anatomical concepts, we attempt to understand the role of *shleshmaashaya* and its systemic influence in the bodily functions.

KEYWORD: *Shleshmashaya*, *Shleshma*, *Kapha*, *Uras*, *Immunity*, *Bala*

INTRODUCTION

The concept of *Ashaya* (आशय) represents one of the system's most sophisticated models of physioanatomical organization. It refers to specialized reservoirs¹ where *Dosha*, *Dhatu*, and *Mala* dynamically interact to maintain homeostasis.² *Ayurveda* describes *Shleshmashaya* as a primary site of *Kapha Dosha*, responsible for structural integrity, lubrication, nourishment, and immune balance.³ The five subtypes of *Kapha* perform distinct functions across different anatomical locations, contributing to systemic homeostasis. Modern correlates include synovial fluid, cerebrospinal fluid, interstitial fluids, and various mucosal secretions.

The classical Ayurvedic texts have systematically enumerated the *Ashaya* as foundation to the body's structural and functional organization. The *Sushruta Samhita* identifies seven primary *Ashaya*⁴, with *Shleshmashaya* listed as the third key reservoir and the principal abode of *Kapha Dosha*, alongside *Vatashaya* and *Pittashaya* - completing the essential triad of *Tridosha* seats. This enumeration establishes *Shleshmashaya* as equally vital to systemic homeostasis as the other *Dosha* centres. This systematic positioning of *Shleshmashaya* within the *Ashaya* classification provides the anatomical and physiological basis for understanding function of *shleshma* and various pathogenesis due to involvement of *shleshma/Shleshmashaya*, when these entities are disturbed or imbalanced.

1. *Shleshmashaya* : The Abode of *Kapha*

Shleshmashaya is primarily located in the thoracic region (*Uras*)⁵, but its influence extends to various sites, other than *uras* the *shleshma* is present in *kantha*, *shiras*, *kloma*, *parva*, *amashaya rasa*. It functions as a reservoir for *Kapha*, ensures lubrication, structural integrity, and metabolic support.

2. *Kapha* Etymology, *sthana*, *vriddhi*, *kshaya*, *dushti*, *prakrita karyas*, *types*

Derived from the root "shlish alingane" (श्लिष अलिङ्गने⁶) which means to adhere, bind or keep it together. **Kapha Dosha**, composed of *Prithvi*(Earth) and *Jala*(Water) elements, which provides structure, lubrication, and stability to the body. Its primary seats are the chest, throat, head, sinuses, joints, stomach. *Kapha*'s essential functions include providing physical strength, immunity, joint lubrication, tissue moisture, calmness, patience, and stability. Its vitiation (**Dushti**), caused by excessive intake of heavy, cold, oily, and sweet foods, manifests as severe lethargy, nausea, excessive sleep, breathlessness, congestion, loss of appetite, and a profound sense of bodily heaviness. An increase (**Vriddhi**) shows similar but less severe symptoms like weight gain, sluggish digestion, and pale skin⁷, while its decrease (**Kshaya**) results in dryness, dizziness, thirst, and a feeling of emptiness in the joints and stomach⁸. *Kapha* is subdivided into five types (**Types**): **Avalambaka** (heart&chest, for support), **Kledaka** (stomach, for moistening food), **Bodhaka** (tongue, for taste perception), **Tarpaka** (head, for nourishing sense organs), and **Shleshaka** (joints, for lubrication)⁹.

2 The Five Subtypes of *Kapha* and Their Anatomical Correlation

2.1. *Shleshaka Kapha*¹⁰:

- **Location:** Bony joints and synovial fluid¹¹
- **Function:** Lubrication and smooth articulation of joints
- **Modern Correlation:** Synovial fluid, proteoglycans



- **Applied Aspect:** Degenerative joint diseases like osteoarthritis indicate *Shleshaka Kapha* depletion, leading to reduced lubrication and joint stiffness.

Shleshaka Kapha is fundamental to joint stability and movement. It reduces friction between articulating surfaces and prevents joint degeneration. The synovial fluid, which acts as a modern correlate, contains hyaluronic acid, lubricin, and phospholipids, all essential for maintaining joint homeostasis.

As per Ayurveda there is description related to shleshmadhara kala. This kala is present in joints and specifically in movable joints. The presence of shleshmadhara kala and the function of *Shleshaka kapha* has been correlated with a wheel of a chariot, that moves and pulls the whole chariot forwards smoothly without any crackling type of sound as the spikes of wheel are greased with shleshma.

When *Shleshaka Kapha* is in balance, movement is effortless, joints remain well-lubricated, and structural integrity is preserved. However, its depletion leads to conditions like **osteoarthritis, joint stiffness, and degenerative disorders**, while excess *Shleshaka Kapha* may cause **joint swelling, synovial effusion, and restricted mobility**.

This *Kapha* subtype also plays a crucial role in the healing and repair of joint tissues. *Ayurvedic* therapies like ***Snehana* (oil therapy) and *Swedana* (steam therapy)** are often used to balance *Shleshaka Kapha*, ensuring joint health and longevity. Thus, here the joints and especially the synovial joints can be considered as *Shleshmashaya* or *Shleshaka kapha* and its function.

2.2 *Kledaka Kapha*¹²:

- **Location:** *Amashaya* (Stomach)¹³.
- **Function:** Aids digestion by moistening and breaking down food.
- **Modern Correlation:** Gastric mucus and bicarbonate secretions.
- **Applied Aspect:** Gastric ulcers, acid reflux, and indigestion stem from *Kledaka Kapha* depletion. Excess *Kledaka Kapha* results in sluggish digestion and *Kapha*-type *Ama* formation.

Kledaka Kapha governs the mucosal lining of the stomach, ensuring a **protective barrier** against stomach acids and aiding in digestion by liquefying ingested food. It is analogous to the mucus-secreting **goblet cells** of the stomach, which release mucin to protect the gastric epithelium.

A healthy *Kledaka Kapha* prevents hyperacidity, ensuring proper **pH balance** in the stomach. When depleted, it leads to **gastric ulcers, acid reflux, and digestive discomfort**. On the other hand, excess *Kledaka Kapha* contributes to **slow digestion, bloating, and mucus accumulation in the GI tract**, resulting in ***Kapha*-type *Ama* (endotoxin) formation**.

Kledaka Kapha also impacts nutrient absorption. By maintaining a hydrated internal environment, it supports enzymatic activity. Digestive herbs like ***Pippali, Musta, and Trikatu*** are often used to regulate *Kledaka Kapha*, ensuring efficient digestion.

C. *Bodhaka Kapha*¹⁴:

- **Location:** Tongue, Salivary Glands, and Oral Cavity
- **Function:** Enhances taste perception and oral lubrication
- **Modern Correlation:** Salivary enzymes, taste buds, and oral mucosa
- **Applied Aspect:** Dry mouth (*Xerostomia*) and diminished taste perception occur due to *Bodhaka Kapha* imbalance, affecting digestion and speech.

Bodhaka Kapha plays a pivotal role in the perception of ***rasa* (taste)**. The salivary glands, a modern equivalent, secrete saliva rich in **amylase, lysozymes, and mucins**, which not only aid digestion but also maintain oral hygiene.

A balanced *Bodhaka Kapha* ensures **proper salivation, optimal taste perception, and efficient swallowing**. When diminished, it leads to **dry mouth (xerostomia), difficulty in swallowing, and impaired taste sensation**, often seen in individuals with **Sjogren's syndrome** or **chronic dehydration**. Excess *Bodhaka Kapha* manifests as **excessive salivation, thick mucus deposits in the throat, and sluggish oral digestion**.

In *Ayurveda*, herbal mouthwashes with **clove, licorice, and triphala** are used to regulate *Bodhaka Kapha*, ensuring proper oral health.

Thus, the oral cavity containing sublingual glands and openings of parotid and submandibular glands along with mucus secreting glands in the lining mucosa of oral cavity is acting as *Shleshmashaya* for initial stages of digestion in the oral cavity under the influence of salivary amylase, salivary kallikrein and lingual lipase. This is considered as *bodhaka kapha* as per ayurveda.

2.3. *Tarpaka Kapha*¹⁵:

Location: Brain, Cerebrospinal Fluid, and Sensory Organs¹⁶
Function: Nourishes the nervous system and maintains mental stability

Modern Correlation: Cerebrospinal fluid (CSF), Vitreous humour, Aqueous humour, Perilymph & Endolymph, Serous Fluid, olfactory mucosa, lingual mucosa

Applied Aspect: Memory loss, depression, and neurodegenerative disorders like Alzheimer's may be linked to *Tarpaka Kapha* depletion, leading to loss of neural nourishment, impaired vision, anosmia, conductive deafness and loss of taste.

Tarpaka Kapha acts as a **nourisher of the nervous system**, akin to cerebrospinal fluid, which cushions and protects the brain. It plays a role in **memory retention, emotional balance, and cognitive function**.

A well-balanced *Tarpaka Kapha* ensures **clarity of thought, emotional stability, and neural protection**. However, its depletion may result in **mental fatigue, memory loss, anxiety, and neurodegenerative conditions like Alzheimer's disease**. On the other hand, excessive *Tarpaka Kapha* may cause **mental lethargy, depression, and reduced intellectual sharpness**.



Brain-nourishing herbs like *Brahmi*, *Shankhapushpi*, and *Jyotishmati* are used in *Ayurveda* to balance *Tarpaka Kapha*, ensuring optimal brain function.

Thus the cranial cavity that houses the brain, which is otherwise recognised as *masthulunga majja/ardhavileena ghrithaakara* and its extension into bony orbit with the content eye (predominantly nervous component of eyeball including retina) considered as *Akshi* as per classical description can be considered as *shleshmashaya* for *tarpaka kapha*. The *tarpana* is the word used to designate, that which nourishes, replenishes and protect the organ. Thus *tarpaka kapha* as described above is residing and replenishing these organs along with the sensory and motor functional areas related to five sense organs and five motor faculties.

2.4. *Avalambaka Kapha*¹⁷:

Location: Thorax (Heart and Lungs)¹⁸

Function: Provides structural support and fluid balance

Modern Correlation: Pleural fluid, pericardial fluid, Mucous
Applied Aspect: Respiratory congestion, pleural effusion, and pericardial effusion suggest an imbalance in *Avalambaka Kapha*, leading to excessive mucus accumulation.

Avalambaka Kapha provides support to the **lungs, heart, and thoracic cavity**. Its modern correlates include **pleural fluid, pericardial fluid, and pulmonary surfactant**, all of which protect and stabilize vital organs.

A well-functioning *Avalambaka Kapha* ensures **smooth breathing, optimal oxygen exchange, and cardiac efficiency**. However, its depletion leads to **dryness in the lungs, respiratory distress, and cardiovascular strain**. Excess *Avalambaka Kapha* results in **mucus accumulation, pleural effusion, and conditions like chronic bronchitis and asthma**.

Ayurvedic interventions, including **steam inhalation, herbal expectorants, and chest massage with *Kapha*-reducing oils**, help regulate *Avalambaka Kapha* and maintain cardio-respiratory balance.

DISCUSSION

The physio-anatomical understanding of *Shleshmashaya* invites a deeper reflection on the *Ayurvedic* view of health and disease. Unlike modern medicine, which often compartmentalizes bodily functions, *Ayurveda* views the body as a dynamic interplay of *Dosha*, *Dhatu* and *Mala*. *Shleshmashaya* serves as more than just a structural entity; it is a functional reservoir that governs key aspects of metabolism, immunity, and psychological balance.

REFERENCES

1. Vagbhata, *Ashtanga Hridaya*. With the commentaries of Arunadatta and Hemādri. Edited by Harishastri Paradkar Vaidya. Varanasi: Chaukhambha Orientalia; Reprint ed. Śārīrasthāna 3/9–10.
2. Suśruta. *Sushrutha Samhitha*. With Nibandhasaṅgraha commentary of Dalhaṇa. Edited by Ambikadatta Shastri. Varanasi: Chaukhambha Sanskrit Sansthan; Reprint ed. Sūtrasthāna 4.
3. Agniveśa. *Caraka Samhitā*. Revised by Caraka and Dṛḍhabala. With *Āyurvedadīpikā* commentary of Cakrapāṇidatta. Edited by Yādavji Trikāmji Ācārya. Varanasi: Chaukhambha Surbharati Prakashan; Reprint ed. Sūtrasthāna 18/51.

Modern science has increasingly acknowledged the role of bodily fluids in maintaining systemic equilibrium. The cerebrospinal fluid (CSF), synovial fluid, and mucosal secretions—once considered mere passive lubricants—are now recognized for their roles in neuroprotection, joint longevity, and immune defense. This aligns with the *Ayurvedic* view that *Shleshmashaya* and its subtypes actively contribute to overall health.

Furthermore, the concept of *Kapha* as a stabilizing entity is significant in modern psychosomatic research. Disorders like depression, anxiety, and chronic fatigue have been linked to disturbances in the body's fluid balance, neurotransmitter levels, and immune function—all domains influenced by *Shleshmashaya*. As new research has uncovered causal link between mental disorders and gastrointestinal diseases. Thus, understanding *Kapha* physiology could offer new insights into managing these conditions holistically.

A crucial takeaway from the study of *Shleshmashaya* is the importance of maintaining balance. While depletion of *Kapha* leads to dryness, degeneration, and weakness, excess *Kapha* results in congestion, lethargy, and metabolic sluggishness. This delicate balance underscores the *Ayurvedic* principle that health is not merely the absence of disease but a dynamic state of equilibrium.

CONCLUSION

Shleshmashaya is a vital anatomical and physiological entity that sustains the body's structural and functional integrity. The five subtypes of *Kapha* perform specialized roles that align with modern scientific principles. Examining the relationships between *Shleshmashaya*, biological fluids, and systemic physiology provides a comprehensive framework for understanding human health.

This model enhances the precision of *Ayurvedic* diagnosis and therapy by:

1. **Guiding Targeted Interventions**
2. **Optimizing Preventive Care**
3. **Strengthening Treatment Protocols**

Future research should focus on validating these principles within *Ayurvedic* pharmacology and clinical practice, ensuring that the understanding of *Shleshmashaya* continues to refine and advance traditional therapeutics. By deepening this knowledge, *Ayurveda* can further strengthen its diagnostic and treatment methodologies, offering more effective solutions for *Kapha*-related disorders.



4. *Suśruta. Sushrutha Samhitha. With Nibandhasaṅgraha commentary of Dalhaṇa. Edited by Ambikadatta Shastri. Varanasi: Chaukhambha Sanskrit Sansthan; Reprint ed. Sūtrasthāna 5/8.*
5. *Bhāvamiśra. Bhāvaprakāśa (Original text with commentary and translation, including Nighaṅṭu portion). Edited by Dr. Bulusu Sitaram. Foreword by Prof. K.C. Chunekar. Varanasi: Chaukhambha Orientalia; Reprint ed. Pūrvakhaṇḍa 5.*
6. *Suśruta. Sushrutha Samhitha. With Nibandhasaṅgraha commentary of Dalhaṇa. Edited by Ambikadatta Shastri. Varanasi: Chaukhambha Sanskrit Sansthan; Reprint ed. Sūtrasthāna 21/5.*
7. *Agniveśa. Caraka Saṃhitā. Revised by Caraka and Dṛḍhabala. With Āyurvedadīpikā commentary of Cakrapāṇidatta. Edited by Yādavji Trikamji Ācārya. Varanasi: Chaukhambha Surbharati Prakashan; Reprint ed. Sūtrasthāna 15.*
8. *Agniveśa. Caraka Saṃhitā. Revised by Caraka and Dṛḍhabala. With Āyurvedadīpikā commentary of Cakrapāṇidatta. Edited by Yādavji Trikamji Ācārya. Varanasi: Chaukhambha Surbharati Prakashan; Reprint ed. Sūtrasthāna 15.*
9. *Suśruta. Sushrutha Samhitha. With Nibandhasaṅgraha commentary of Dalhaṇa. Edited by Ambikadatta Shastri. Varanasi: Chaukhambha Sanskrit Sansthan; Reprint ed. Sūtrasthāna 15/4.*
10. *Vagbhata, Aṣṭāṅga Saṅgraha. Edited by Shivoprasad Sharma. Varanasi: Chaukhambha Sanskrit Series Office; Reprint ed. Śārīrasthāna 20.*
11. *Suśruta. Sushrutha Samhitha. With Nibandhasaṅgraha commentary of Dalhaṇa. Edited by Ambikadatta Shastri. Varanasi: Chaukhambha Sanskrit Sansthan; Reprint ed. Sūtrasthāna 21/14.*
12. *Suśruta. Sushrutha Samhitha. With Nibandhasaṅgraha commentary of Dalhaṇa. Edited by Ambikadatta Shastri. Varanasi: Chaukhambha Sanskrit Sansthan; Reprint ed. Sūtrasthāna 21/12.*
13. *Agniveśa. Caraka Saṃhitā. Revised by Caraka and Dṛḍhabala. With Āyurvedadīpikā commentary of Cakrapāṇidatta. Edited by Yādavji Trikamji Ācārya. Varanasi: Chaukhambha Surbharati Prakashan; Reprint ed. Sūtrasthāna 20/8.*
14. *Vagbhata, Ashtanga Hridaya. With the commentaries of Arunadatta and Hemādri. Edited by Harishastri Paradkar Vaidya. Varanasi: Chaukhambha Orientalia; Reprint ed. Śārīrasthāna 12.*
15. *Suśruta. Sushrutha Samhitha. With Nibandhasaṅgraha commentary of Dalhaṇa. Edited by Ambikadatta Shastri. Varanasi: Chaukhambha Sanskrit Sansthan; Reprint ed. Sūtrasthāna 21/14.*
16. *Bhāvamiśra. Bhāvaprakāśa (Original text with commentary and translation, including Nighaṅṭu portion). Edited by Dr. Bulusu Sitaram. Foreword by Prof. K.C. Chunekar. Varanasi: Chaukhambha Orientalia; Reprint ed. Pūrvakhaṇḍa 3/178a.*
17. *Vagbhata, Ashtanga Hridaya. With the commentaries of Arunadatta and Hemādri. Edited by Harishastri Paradkar Vaidya. Varanasi: Chaukhambha Orientalia; Reprint ed. Śārīrasthāna 12/15.*
18. *Vagbhata, Ashtanga Hridaya. With the commentaries of Arunadatta and Hemādri. Edited by Harishastri Paradkar Vaidya. Varanasi: Chaukhambha Orientalia; Reprint ed. Śārīrasthāna 12/151.*