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Review Article

UNDERSTANDING OF KAPHAJA SHIROROGA W.S.R. TO SINUSITIS

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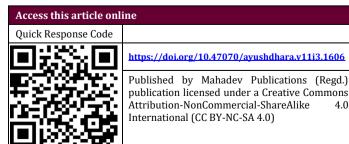
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ABSTRACT

Ayurveda, encompasses eight branches known as Ashtangas. Among these, Shalakya Tantra specializes in the diagnosis and treatment of diseases affecting the Urdhwajatru-head and neck. Acharya Sushruta, a revered figure in Ayurvedic medicine, meticulously detailed the management of eleven head diseases, termed Shirorogas, in the Uttara Tantra of Sushruta samhita. One of these diseases, Kaphaja Shiroroga, closely aligns with the modern medical condition of Sinusitis based on its signs and symptoms. Kaphaja Shiroroga presents with symptoms such as a sensation of heaviness, mucus accumulation, stiffness, coldness and swelling around the eyes. Sinusitis, a contemporary counterpart, involves inflammation of the sinus tissues- air-filled spaces in the forehead, cheeks and nose. This inflammation results in facial pain, nasal congestion or discharge and sometimes fever, often triggered by a common cold. However, sinusitis can also be caused by viruses, bacteria, fungi, or allergies. Classified as a Kaphaja Vyadhi (disease caused by an imbalance of the Kapha dosha), Kaphaja Shiroroga is treated through various Ayurvedic procedures, including Shirovirechana (cleansing of head), Kavala (gargling), Snehana (oiling), Swedana (sudation), Vamana (therapeutic emesis), Upanaha (poultice) and Dhumapana (medicated smoking). The choice of treatment is determined by the physician's expertise and tailored to the patient's specific needs. By following these methodologies, Ayurveda aims not only to eradicate the disease but also to minimize the likelihood of recurrence, thus promoting long-term health and well-being.

INTRODUCTION

Shiras is known as Uttamanga for many reasons such as for existing vital organs like Prana, Indriya, Pranavaha srotas, Sadyopranahara marma, Pranavata, Sadaka pitta, Alochaka pitta, Tarpaka kapha. Acharya Sushruta has classified Shiroroga in to eleven types whereas Acharya Vagbhata has mentioned nineteen types and Acharya Charaka has enumerated five types of Shiroroga is being one of them. Kaphaja shiroroga being the Kapha pradhanika vyadhi exhibits Lakshanas such as Shirogalam yasya Kaphopadigdam, Gurutva, Prathistabdam, Himam, Shunakshikutam vadanam.



Nasa or the Siras of the Shiras. This obstructs the Srotas and further vitiates the Kapha and causes Kaphaja shiroroga. The treatment principle includes two main modalities Shodana and Shamana chikitsa in which Shodhana includes Deepana-pachana, Shiro virechana, Vamana, Kavala, Abhyanga and Swedana. Shamana chikitsa includes Kashaya, Vati, Lepa, Pratimarsha nasya and Rasayana. Sinusitis is an inflammation or the swelling of the tissues which are lining the sinuses, sinuses are the air filled structures in head. Viral, bacterial infections and allergies can irritate these sinuses causing them to be blocked and filled with fluid which causes pressure and tenderness in those sinuses regions which can be exhibited in acute, subacute and chronic forms.[5] The prevalence of sinusitis in the general population is estimated to be around 14% of adults every year according to National

Ambulatory Medical Care Survey (NAMCS).

Due to the vitiation of Kapha and Vata dosha

leads to the formation of Ama where Vata dosha

circulates Ama all over the body and gets localized in

treatment principle primarily includes antibiotics, corticosteroids and in advance stages surgery like maxillary antral washout and balloon sinuplasty.^[6]

Kaphaja Sirashula Etiopathogenesis^[7]

Nidanas

Kaphaja Shirashula, as detailed in Ayurveda, involves a complex etiopathogenesis that centers on the aggravation of Kapha dosha due to specific dietary (Aharaja) and lifestyle (Viharaja) factors. According to Acharya Charaka, the etiopathogenesis begins with the indulgence in certain Nidanas (causative factors).

Aharaja Nidanas

- **Sedentary habits:** Prolonged sitting (*Asane*) and excessive sleeping (*Nidra*) are significant contributors. These habits promote the increase of *Kapha dosha* by fostering a state of inactivity and lethargy.
- Consumption of heavy and unctuous foods:
 Foods that are *Guru* (heavy) and *Snigdha* (unctuous) are difficult to digest (*Agni mandya*).
 These foods include dairy products, sweets, and oily substances, which directly increase the *Kapha dosha*.
- **Overeating:** Consuming food in large quantities overwhelms the digestive fire (*Agni*), leading to improper digestion (*Ajirna*) and accumulation of undigested food (*Ama*). This further exacerbates *Kapha*, causing it to accumulate in the body, particularly in the *Shiras* (head).

Viharaja Nidanas

- Excessive cold food intake: Regular consumption of *Sheeta* (cold) or refrigerated foods increases *Kapha* by introducing more of the cold quality, which is inherent in *Kapha*.
- Exposure to cold environments: Being frequently exposed to *Sheeta vayu* (cold breeze) or *Prabhata vayu* (early morning wind) without proper protection aggravates *Kapha*. This exposure can happen during early morning walks or in cold climates.
- **Inadequate clothing:** Failing to wear necessary clothing to guard against cold environments (*Anupadhana*) allows the cold quality to permeate the body, increasing *Kapha*.

Samprapti

When these *Nidanas* are indulged in over time, they lead to the vitiation and aggravation of *Kapha dosha*. The vitiated *Kapha* begins to accumulate and lodge in the *Shiras pradesh* (head region). This process involves several stages:

- *Dosha Prakopa* (Aggravation of *Dosha*): The aforementioned *Nidanas* aggravate *Kapha*, leading to an increase in its inherent qualities like coldness (*Sheeta*), heaviness (*Guru*) and unctuousness (*Snigdha*).
- *Sthana Samshraya* (Localization): The aggravated *Kapha* then migrates and localizes in the *Shiras pradesh*. This localization is facilitated by the channels (*Srotas*) that are connected to the head.
- *Margavarodha* (Obstruction of Channels): The accumulated *Kapha* obstructs the normal functioning of the *Srotas* in the head. This obstruction leads to a build-up of mucous and fluids, contributing to a sensation of heaviness and congestion.
- *Vyakti* (Manifestation of Symptoms): The obstruction and accumulation of *Kapha* manifest as *Kaphaja Shirashula*. The primary symptoms include a dull, aching pain, a feeling of heaviness in the head, and often a sensation of coldness or congestion.

Thus, the etiopathogenesis of *Kaphaja Shirashula* involves a complex interplay of dietary and lifestyle factors leading to the aggravation of *Kapha dosha*, its accumulation in the head, and subsequent obstruction of channels, resulting in the characteristic headache. *Rupa* [8,9,10]

The *Lakshanas* (symptoms) of *Kaphaja Shirashula*, as detailed by the ancient Ayurvedic scholars *Sushruta*, Charaka, and *Vagbhata*, encompass a variety of specific signs that reflect the predominance of *Kapha dosha* in *Shira pradesha*.

According to Sushruta

- **Shirogala Kaphopadigdha:** The head and throat feel as if they are smeared with *Kapha*, indicating a sense of stickiness and congestion in these areas.
- *Guru Pratistabdha Hima*: There is a sensation of heaviness (*Guru*), inactivity or stiffness (*Pratistabdha*), and coldness (*Hima*) in the head, which are classic *Kapha* qualities.
- **Shunakshikuta Vadana:** Swelling of the orbit (around the eyes) and face, which is indicative of *Kapha's* moist and accumulating nature causing edematous conditions.

According to Charaka

Shiro gurutwa: Heaviness in the head, a prominent feature of *Kaphaja* disorders due to the inherent heaviness (*Guru*) of *Kapha dosha*.

According to Vaabhata

• *Aruchi*: Loss of taste or appetite, reflecting the dampening effect of *Kapha* on the digestive fire (*Agni*) and sensory perception.

- *Shiro Guru Stimitha* and *Sheetata*: Feeling of heaviness (*Guru*), stiffness (*Stimitha*), and coldness (*Sheetata*) of the head, showcasing the *Kapha* qualities of heaviness and cold.
- *Sira Anishyandata*: Non-throbbing veins, indicating a lack of pulsation or movement, which aligns with the stagnant nature of *Kapha*.
- *Alasya*: Lassitude or a general feeling of tiredness and lethargy, common in *Kapha* aggravation.
- *Ruk Daha Adhika Nishi*: Pain (*Ruk*) and burning sensation (*Daha*) that are mild during the day but become severe at night, suggesting a diurnal variation where *Kapha's* influence is more pronounced at night.
- *Tandra*: Stupor or drowsiness, indicating the clouding effect of *Kapha* on the mind and senses.
- *Shunakshikutatwa*: Swelling of the eye socket, which is another sign of *Kapha's* tendency to cause fluid retention and swelling.
- *Karnakandu*: Itching inside the ears, reflecting the *Kapha's* mucous-like, sticky quality causing discomfort in the ear canals.
- *Vami*: Vomiting can occur due to the upward movement of *Kapha*, causing nausea and expulsion of contents from the stomach.

In summary, *Kaphaja Shirashula* is characterized by symptoms that emphasize the dominance of *Kapha's* qualities: heaviness, coldness, sluggishness, and a tendency to cause fluid accumulation and congestion. These symptoms collectively depict the systemic impact of *Kapha dosha's* vitiation in the head region, as elaborated by the classical Ayurvedic texts.

Ayurvedic Treatment Protocol for Kaphaja Shirashula (headache) according to three Acharyas: Chikitsa According to Acharya Sushruta [11,12,13]

- *Kaphahara Kriyas* (therapies to alleviate *Kapha*)
- *Shirovirechana* (errhine therapy): Administering medicated substances through the nasal route to cleanse the head region.
- *Vamana* (emesis therapy): Inducing therapeutic vomiting to expel excess *Kapha Dosha*.
- *Teekshna Gandusha* (strong gargling): Gargling with strong medicated liquids to clear *Kapha*.
- Accha Sarpi Pana (consumption of clarified butter): Intake of old ghee (Purana Ghrita) to balance Doshas.
- *Swedana* (sudation therapy): Inducing sweating to eliminate toxins and alleviate *Kapha*.

Chikitsa According to Acharya Charaka 1. Shamana Chikitsa (Palliative Therapy)

• *Swedana* (fomentation therapy): Using heat to induce sweating and relieve symptoms.

- *Dhuma* (medicated smoking): Smoking medicated herbs to clear the respiratory tract.
- *Nasya* (nasal administration): Administering medicated oils and powders through the nose.
- *Pradhamana* (Insufflation): Insufflating medicated powders into the nostrils.

2. Dietary and Lifestyle Management

Kapha-Alleviating paste and diet: Utilizing a diet and topical applications that reduce *Kapha Dosha*.

Purana Ghrita (old ghee): Intake of aged ghee to balance *Doshas*.

Tikshna Basti (strong enema): Administering a strong cleansing enema to purify the body.

3. Additional Procedures

Daha (Agni Karma/cauterization): Applying heat treatment on the forehead and temporal region, particularly in *Vataja* and *Kaphaja Shiro Roga*.

Raktamokshana (bloodletting): Performing bloodletting to eliminate the remaining morbid *Doshas* post-cauterization.

4. Specific Formulations

Erandadi Dhumavarti: Preparing Dhuma Varti (medicated smoking sticks) with Eranda (castor), Nalada, Ksauma, Guggulu, Aguru, and Chandana. Avoiding Kushta and Tagara to prevent Mastulunga Kshaya (brain tissue damage).

Chikitsa According to Acharya Vagbhata

1. Shodhana Chikitsa (Purification Therapy)

- *Upavasa Chikitsa* (fasting therapy): Utilizing fasting to balance *Doshas*.
- *Snehana* (oleation therapy): Consuming and applying *Purana Ghrita* (old ghee) followed by *Vamana* (emesis therapy).
- Ruksha Pinda Sweda: Applying dry heat to induce sweating.
- Nadi Sweda: Using steam with decoctions of Shigru (drumstick), Nimba (neem), and Eranda (castor) for sweating.

2. External Applications

Sukoshna Alepa (warm poultice): Applying a warm paste made of *Devakastha*, Kustha, Sharangeshta, Sarala, Rohisa, and Saindhava (rock salt).

Upanaha (poultice): Applying a mixture of *Yava* (barley), *Madhuka*, *Chandana*, *Haridra*, *Kustha*, *Priyangu*, *Shatapushpa*, *Suradaru*, oil, goat's milk, and *Saindhava* on the head.

3. Nasya and Dhumapana (Nasal and Smoking Therapies)

Vidanga Taila: Administering oil prepared with *Vidanga*, sometimes boiled with *Vyosha*, *Madhuka Sara*, *Meshashringi* bark, or *Ingudi* mixed with *Madhu* (honey).

Pradhamana Nasya: Using Shirovirechana Dravya Churna (errhine powders) for nasal insufflation.

Marsha or *Pratimarsha Nasya*: Administering *Shirovirechana Dravya Taila* (errhine oils) through the nasal route.

Post-Shirovirechana Nasya: Using *Tiladi Taila* and *Shushkamulakadi Taila* as mentioned in *Karna Nada Chikitsa*.

This comprehensive Avurvedic treatment protocol for Kaphaja Shirashula integrates the approaches of Acharya Sushruta, Charaka, and Vagbhata. Each Acharya provides unique methods, including Shodhana and Shamana Chikitsa, dietary and lifestyle modifications, external applications, and specific formulations. These therapies aim to balance the Doshas and eliminate toxins, offering a holistic approach to managing Kaphaja Shirashula. Proper implementation under the guidance of a qualified Avurvedic practitioner is essential for effective results. Sinusitis is an inflammation or infection of the paranasal sinuses, which are air-filled spaces within the bones around the nose. This condition can be caused by bacteria, such as Streptococci and Haemophilus influenzae, as well as viruses and fungi. Sinusitis is often associated with upper respiratory infections and severe asthma, particularly in individuals with nasobronchial allergies. It can be divided into acute and chronic sinusitis.

Acute and Chronic Sinusitis

Sinusitis, whether acute or chronic, is often precipitated by rhinitis. During a cold or viral infection, mucociliary clearance becomes significantly impaired. This impairment, along with thickened mucus and mucosal edema causing infundibular and ostiomeatal obstruction, predisposes the sinuses to bacterial colonization. Sneezing, coughing, and nose-blowing can create pressure differentials that favor sinus invasion. Once bacteria enter an obstructed sinus, the environment supports robust bacterial growth.

Acute Sinusitis

Acute sinusitis typically follows a viral upper respiratory infection that fails to resolve within a week. If symptoms such as fever, facial pain, nasal discharge, and nasal obstruction persist beyond 10 days, a bacterial sinus infection is likely. Occasionally, patients present with classic sinusitis symptoms, including fever, facial pain, tenderness, erythema, or swelling, without prior viral symptoms. Nosocomial sinusitis is common in intensive care units, with prolonged nasotracheal intubation being a significant risk factor. Sinusitis can also be a source of occult fever and sepsis in hospitalized patients.

Diagnosis can involve microscopic examination and culture of nasal secretions. Imaging techniques,

like the occipito-mental (Water's) view and computed tomography (CT), are useful. CT scans often reveal mucosal thickening with an irregular appearance and gaseous bubbles, indicating a highly viscous substance adherent to the sinus walls.

For acute sinusitis, a 10-day course of selected antibiotics can cure over 90% of infections. However, the emergence of resistant organisms, such as penicillin and methicillin-resistant Staphylococcus aureus and beta-lactam-resistant H. influenzae and M. catarrhalis, is concerning. Effective antibiotics include amoxicillin with clavulanate and cefuroxime axetil.

Chronic sinusitis is defined as the persistent inflammation of the sinuses lasting at least four weeks despite appropriate therapy. It is characterized by inflammatory thickening and polypoid changes in the mucosa, along with marked tissue eosinophilia. If patients do not respond to antibiotics, treatment may include corticosteroids, decongestants, and allergen control. Surgery is considered for those with large obstructing polyps, suspected tumors, mucoceles or pyoceles, fungal sinusitis, or when the condition leads to complications such as brain abscess, meningitis, cavernous sinus thrombosis, or subdural empyema.¹⁴

DISCUSSION

In Ayurveda, the head (*Shiras*) is revered as *Uttamanga* due to its vital role in housing the senses (*Indriyas*), sensory pathways (*Indriyavahi srotas*), and life-sustaining channels (*Pranavaha srotas*), including the brain (*Mastishkya*). The human body is depicted as an inverted tree, with roots pointed upwards, emphasizing the importance of the head. Modern science also acknowledges the significance of the head, with the brain being a crucial organ, and the nose, ears, tongue, and nerves playing important roles. Sinuses, located near the nose, connect to the nasal cavity, further underscoring the intricate anatomy of the head.

In Ayurveda, the phrase "Nasohi shiraso dwaram" [15] highlights the nose as the gateway to the head. Therefore, the administration of medicated drops (Nasya Karma) through the nose is highly beneficial, particularly for disorders above the clavicle (Urdhwajatru Vikaras). Kaphaja Shiroroga, a type of headache associated with Kapha dosha imbalance, benefits significantly from Shirovirechana (nasal cleansing). Shodhana type of Nasya Karma, which involves purification, is especially effective in treating Kaphaja Shiroroga.

Kaphaja Shiroroga and Sinusitis

In *Kaphaja Shiroroga*, the causative factors (*Nidanas*) include exposure to pollen grains, dust particles, animal dander (*Rajo*), smoke (*Dhooma*), cold air (*Sheeta vayu*), and seasonal changes (*Pragvata Sevana*). These factors lead to the vitiation of *Doshas*,

predominantly *Kapha*. The resulting *Ama* (toxins) circulates through the body with *Vata dosha* and accumulate in areas of vulnerability (*Khavaigunya*), particularly in the head (*Shiras*). This can be compared to the inflammation and swelling of the mucosal lining of the sinuses in modern medical terms, causing mucus build up and sinus headaches.

The treatment principle in Ayurveda aims to drain the retained discharge (vitiated *Kapha* or mucus build-up) from the sinuses. This is achieved through *Teekshna Nasya* (strong nasal therapy), *Kavala* (gargling), *Dhoomapana* (medicated smoking), and *Vamana* (therapeutic emesis), with a focus on *Shodhana Nasya* (purification nasal therapy). In modern medicine, the treatment involves properly draining the mucus build up and ventilating the sinuses through medical and surgical management.

Overall, both Ayurveda and modern medicine emphasize the importance of proper drainage and management of sinusitis to alleviate symptoms and improve patient outcomes. The integrative approach combining traditional Ayurvedic practices with modern medical interventions can offer a comprehensive solution for managing *Kaphaja Shiroroga* and sinusitis.

CONCLUSION

The paranasal sinuses, which are air-filled spaces within the bones of the skull, form a crucial part of the *Shiras* (head) framework in Ayurveda. Many descriptions of *Kaphaja Shiroroga* closely align with the symptoms and characteristics of sinusitis. Therefore, sinus headaches or sinusitis can be considered as manifestations of *Kaphaja Shiroroga*. Given the growing concerns about the side effects of modern medications, the increasing resistance to antibiotics, the fear and complications associated with surgical interventions, and the overall expenses involved, Ayurvedic treatments for *Kaphaja Shiroroga* offer a compelling treatment.

Additionally, Ayurvedic treatments provide the benefit of immunomodulation, helping to strengthen the body's natural defences against infections. By focusing on holistic approaches that aim to balance the *Doshas* and remove accumulated toxins (*Ama*), Ayurveda addresses the root causes of *Kaphaja Shiroroga* rather than just alleviating the symptoms.

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