



A CONCEPTUAL STUDY OF SURYAVARTA- WITH SPECIAL REFERENCE TO SINUSITIS

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ABSTRACT

Acharaya Sushruta has mentioned 11 types of Shiro-Roga in Uttar Tantra. Suryavarta is one of the Shiroroga. In Suryavarta, there is frontal, as well as temporal headache, pain in eye, eyebrows, which starts in the morning, increases till afternoon and gradually subsides in the evening. Headache starts with dull pain, which gradually increases as day progresses. Associated symptoms are related to vata, pitta and kafa dosha. Vata dosha is more dominant in disease process. A sinus headache is caused by collected mucus as a result of inflammation and pressure within the sinuses during a sinus infection. The pain from sinus headaches is usually more of a dull pain versus a sharp rapid pain. Therefore sinusitis can be considered under this Shiroroga-Suryavarta. In the present study, a review is presented on Suryavarta Shiroroga and sinusitis to enlighten the correlation and thus providing an alternative treatment option for sinusitis.

KEYWORDS: Paranasal sinuses, Suryavarta, Shiroroga, Sinusitis.

INTRODUCTION

Various types of Shirorogas are mentioned in Ayurveda, and Suryavarta Shiroroga is one of them. Similarly in modern science during headache classification, headache from sinus origin is associated with symptoms like nasal congestion, nasal discharge, post nasal drip etc. Sinusitis has a significant impact on the quality of life of affected individuals due to pain and discharge. The reason behind the sinusitis may be the urbanization which leads to infections like various types of viruses, bacteria and fungi; increasing pollution and dust, fumes causing allergic sinusitis. And one of the main causes is increasing resistance to the antibiotics. Being a developing country and densely populated the incidence of the disease is high in India. The treatment of sinusitis includes antibiotics, decongestants, antihistamines, analgesics and surgical procedures. Although these treatments offer good contributions towards the healing process, but sinusitis is not successfully combated due to its recurrence and well known side effects of the medicines. In view of magnitude of the problem, there is a need to elucidate a therapy within reach of patient and having the potential to drain the sinuses by removing the pathology with sustained effect and reduced recurrence. Therefore the present review on Suryavarta with special reference to sinusitis helps to find out an alternative treatment option like Nasya therapy, raktamokshana, Shamana therapy etc.

Mastishka indriya

In Ayurveda, Mastishka (head) is Dashavidha Pranayatanas and having vital Marmas. Mastishka is the seat of all Gyanendriyas and controls the functions of Karmendriyas. All the Indriyas, and Pranavaha Srotas depend on the Mastishka for their functions and all the sense organs and the channels carrying the sensory and vital impulses from the Mastishka are like the rays from the sun.^[1] Ayurveda considers that Vata, Pitta and Kapha are three pillars responsible for good health, and their imbalance causes various diseases. Such imbalance results in various signs and symptoms as in Shiroroga Suryavarta.

Suryavarta Nidana^[2]

- i. Sandharana (resisting natural urges)
- ii. Raktadushtikar ahara vihar
- iii. Ajirna (due to excessive and improper food intake)

Due to Sevana of these Nidanas, Ama is formed which causes Srotorodha. Due to hypo functioning of Agni, the undigested food residue is formed. This residue is known as Ama and is said to be the root cause of all the diseases. "Amyate Peedyate Srotasa Samuho Anena iti Aam" i.e. substance which is detrimental to Srotas is termed as Ama and it produces pain or creates pressure on Srotamukha and accumulates in Srotamukha.

Rupa^[3,4]

Due to indulgence in the above mentioned etiological factors tridosha get vitiated and provoked in the head and results in the following sign and symptoms of Suryavarta- *Suryodaym prati Mandmand akshi bhruv ruk.* (dull ache starts in the morning at frontal head, eye, eyebrows).

Vivardhate chanshumata sahaiva suryapvrutto vinivartate (Pain, headache increases with rising of sun. It is at the peak in the afternoon, and gradually subsides in the evening when the sun sets.)
Rujam saspandana (throbbing pain)

Vivardhishnu kshudwat (Pain is more when one is hungry)

Shiro ruja subsides sometimes with shitopchara sometimes ushnopachra.

Samprapti^[5]

Aacharya Charaka, Sushruta and Vagbhata explained that as a consequence of indulgence in the nidana of Suryavarta, rakta and vata get vitiated and both vitiate Mastishka, causing the disease Suryavarta which is having specific characteristic signs and symptoms related to Sun rise to Sunset. So the name Suryavarta.

Table 1: Samprapti Ghataka of Suryavarta.

Dosha	Tridosha- vata, pitta, kafa
Dushya	Rakta
Adhithana	Mastishka
Vyakta Sthana	Shankha (temporal region), lalata- frontal sinus, akshi (eyes), bhru (eyebrows, frontal sinus)
Agni	Jatharagnimandya
Rogamarga	Madhyama
Sadhya sadhyatwa	Kashtasadhya

Chikitsa^[6,7]

In Suryavarta Shiroroga, to treat strotorodha, measures such as Shirovireka (head purgatives) nasya is main panchkarma treatment, and Virechana (purgatives), raktamokshana (blood letting), shirolepa, upanah treatments are also given. According to Aacharya Charaka, in all types of Shiroroga, Nasya Karma is the prime treatment modality. In the context of treatment of Suryavarta, acharya mentioned that for relief of pain and headache raktmokshana should be done. Next treatment is shirovireka nasya. After nasal medications (Nasya) the patient should be treated well with Lepa (application of herbal pack), parisheka. Pathyakar aahar includes food and drink, curative of vata and rakta. Food should be cooked with ghee. Use of sweets made from milk, ghee and butter is helpful. Sweets like jalebi, rabadi, porridges, should also be used.

Sinusitis

The term, sinusitis, refers to a group of disorders characterized by inflammation of the mucosa of the nose and paranasal sinuses.^[8] The paranasal sinuses are air containing spaces in certain bones of skull and they are in direct communication with the nasal cavity through their openings called ostia. They are four on each side- Maxillary sinus, Frontal sinus, Ethmoidal sinus and Sphenoid sinus.^[9] The sinus most commonly involved is the maxillary sinus followed in turn by ethmoid, frontal and sphenoid. Very often, more than one sinus is involved (multi-sinusitis). Sometimes all the sinuses are involved, resulting in pan-sinusitis.^[10]

Epidemiology

Sinusitis is an extremely prevalent disorder that has a significant impact on the quality of life of affected individuals. According to the National Ambulatory Medical Care Survey (NAMCS), approximately 14% of

adults report having an episode of rhinosinusitis each year, and it is the fifth most common diagnosis for which antibiotics are prescribed, accounting for 0.4% of ambulatory diagnoses.^[11] In India chronic sinusitis affects nearly 134 million people, making it the country with the second largest number of sufferers in the world. 1 in 8 Indians suffer from chronic sinusitis.^[12]

Pathophysiology

An inflammatory response is an expected sequel of an infectious process. Inflammation in the nose and sinuses from a variety of causes can result in sinus ostia obstruction and predispose to the development of an infection. Acute rhinosinusitis develops in conjunction with an acute viral upper respiratory tract infection. Antigen-antibody reactions result in the release of inflammatory mediators which cause changes in vascular permeability, destabilization of lysosomal membranes and other reactions that produce inflammation, mucosal swelling and ostia obstruction. A reduction in oxygen tension occurs which can reduce mucociliary transport and transudation of fluid into the sinuses. The inflammation also results in change in the mucous that becomes more viscous and alterations in cilia beat frequency often occurs. These changes in the nasal-sinus environment lead to mucostasis.^[13] In chronic infections, process of destruction and attempts at healing proceed simultaneously. Sinus mucosa becomes thick and polypoidal (hypertrophic sinusitis) or undergoes atrophy (atrophic sinusitis). Surface epithelium may show desquamation, regeneration or metaplasia.^[14]

Table 2: Diagnosis.

Major Symptoms	Minor Symptoms
Purulent anterior nasal discharge	Headache
Purulent or discolored posterior nasal discharge	Ear pain, pressure, or fullness
Nasal congestion or obstruction	Halitosis
Facial congestion or fullness	Dental pain
Facial pain or pressure	Cough
Hyposmia or anosmia	Fever (for subacute or chronic sinusitis)
Fever (for acute sinusitis only)	Fatigue

Conventional criteria for the diagnosis of sinusitis based on the presence of at least 2 major or 1 major and ≥ 2 minor symptoms.^[15]

Treatment

Medical treatment remains the mainstay of treatment which includes antibiotics, systemic decongestants, local nasal decongestants like- 1% ephedrine or 0.1% oxymetazoline or xylometazoline (not for >5 days because of the potential for rebound congestion and development of rhinitis medicamentosa) and analgesics. Surgical intervention is done if the infection fails to resolve with medical treatment.

DISCUSSION

Shiro/Mastishka and Paranasal sinuses

Shir (Head) is considered as Uttamanga, occupying prime place, therefore Shalaky Tantra is also named as Uttamanga Chikitsa. All the Indriyas, Indriyavahi and Pranavaha Srotasa depend on the Shir for their functions. According to modern science, skull or head consists of the calvaria or brain box which encloses the brain and the facial skeleton lodging all structures of face including the sense organs viz. eye, ear, nose, and tongue. Brain is the body's control center. All the functions of body like digestion, respiration, circulation, sensations, thoughts, communications etc. are based on this framework of head. Therefore paranasal sinuses which are air filled spaces in the bones of skull are one among the structures of Shir (Head).

Suryavarta and Sinusitis

Headache is a term commonly used for pain felt anywhere in the head and is described under the heading of Shirorogas in classics. Sinus headache or headache due to sinusitis is caused by mucus build-up as a result of inflammation and pressure within the sinuses during a sinus infection. The pain from sinus headaches is usually more of a dull pain, it may be more when mucosal lining gets inflamed and so ostia obstructs the discharge, and it gets accumulated in the sinuses. In Ayurveda also, pain in Suryavarta is dull at the beginning of the day, but gradually increasing during the day.

Nidanas mentioned for Suryavarta Shiroroga like vegvidharana, various types of ajirna points toward the changing life style which is a significant cause in etiology of sinusitis. Internally Khavaigunya in Shir occurs due to vitiated Rakta as a result of above

mentioned Nidana sevana while externally due to viruses, bacteria, fungi and allergens.

Aacharya Sushruta described that the vitiated Doshas travel all around the body and lodge at sites where Khavaigunya exists producing Vyadhi.^[16] Khavaigunya in Shir occurs due to vitiated rakta and tridosha. Therefore while Ama circulating in the whole body with the help of Vata, the chief presentation of the disease occurs in Shir as Khavaigunya found at that place. Khavaigunya may be compared to naso-cilliary destruction or swollen and thickened mucosal lining of the sinuses as a result of inflammatory response. According to modern science, pathology that mainly contributes to the evolution of sinusitis is:

- Edematous obstruction of sinus ostia resulting in retention of the discharge in the sinus.
- Diminished mucocilliary transport.
- Fall of pO_2 within the sinus due to impaired ventilator exchange.

The principle aim of the treatment is also same. In Suryavarta treatment, main concentration is given to the Dosha Apkarshana from Urdhvajatra Pradesha by administering Virechan Nasya. The modern system of medicine also concentrates to proper drainage and ventilation of sinuses through medical and surgical management. The main treatment which can drain the retained discharge from the sinuses is Shodhana Nasya. Nose being the doorway to head and Nasya drug extracts the morbid Doshas from the head raktamokshana is also useful to release congestion.

CONCLUSION

Paranasal sinuses which are air filled spaces in the bones of skull are one among the structures of Shir (Head). Most of the description of Suryavarta is similar to sinusitis. Therefore sinus headache or sinusitis can be considered as Shiroroga Suryavarta. Considering the points like side effects of medicines, developing resistance of antibiotics, cost, fear and complications of surgeries, above mentioned Ayurveda treatment modalities of Suryavarta are quite safer and have the potential to drain the sinuses, relieving the pain along with immunomodulation.

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