

“Analytical Study of Atrophic Rhinitis with Special References to Ayurveda”

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ABSTRACT

Apeenasa is a first and foremost among the different types of Nasagata Roga described by Sushrut. There is vitiation of pitta and Kapha Dosha characterized by nasal obstruction, running nose, dryness of nose, anosmia and loss of taste and foul smell emanating from nasal cavity. This condition can be co-related with atrophic rhinitis because most of the signs and symptoms are similar. Atrophic rhinitis is a chronic disease of nasal mucosa. The disease is characterized by abnormally wide nasal cavities, and its main symptoms are dryness, crusting, atrophy, fetor, and a paradoxical sensation of nasal congestion. Atrophic rhinitis is the most common type of chronic rhinitis, affecting 10 to 20% of the population, and evidence suggests that the prevalence of the disorder is increasing. Chronic atrophic rhinitis has been associated with significant impairment in quality of life, sleep and work performance. Sinusitis is defined as the inflammation of the mucosa either of any one or all of the paranasal sinuses. In humans, there are four paired sinuses which are termed as paranasal sinuses and they are maxillary, frontal, ethmoid and sphenoid sinuses. Ayurveda being an ancient holistic science aims at alleviating the disease and protection and prevention of the positive health. Shalakya Tantra is one of the Astangas of Ayurveda that deals with the Uttamanga and the diseases related to Urdhvajatru. Paranasal sinusitis, the most common disease in Shalakya tantra can be correlated to the disease Apeenasa, Peenasa, Dusta Pratishyaya etc in Ayurveda based on its signs and symptoms.

Keywords: Apeenasa, Urdhvanga, Dusta Pratishyaya, Atrophic rhinitis

INTRODUCTION

Shalakya is an important branch among eight branches of Ayurveda which deals with the diseases manifesting above the clavicular region. Shalakya Tantra is stream of Ayurveda which deals with problem of Urdhwajatru (parts of body located above clavicle bone; eye, ear, nose and throat etc.). The branch mainly utilizes Shalaka Yantras which are rod like instruments for therapeutic purposes. As per modern science this stream can be correlated with E.N.T. and ophthalmology. Shalakya tantra involves various Chikitsas including Karnachikitsa, Nethrachikitsa, Mukharogachikita, Shirorogachikitsa and Nasachikitsa, etc. Charak Samhita, Sushrut Samhita and Ashtanga Hrudaya all of them encompasses literatures related to the Shalakya Tantra. As per modern science this modality helps to treat different pathological conditions like; conjunctivitis, glaucoma, eye allergies, cataract, ear infections and nasal problems, etc. The surgical and para-surgical methods also described in traditional texts of Ayurveda under heading of Shalakya Tantra for the management of disorders of ear, eyes, nose and throat, etc.

Shalakya Tantra is vital part of Ashtang Ayurveda which deals with Uttamang chikitsa. The Ayurveda branch Shalakya Tantra can be correlated to E.N.T. branch of modern science. Nasya, Varti, Anjana, Shirovirechana Karma, Karnapoorana, Padabhyanga Karmas and Akshitarpana, etc. are some approaches of Shalakya Tantra which helps in the management of various diseases of upper body parts such as; Galganda, Upajihvika, Galashundi, Galgraha, Karnamoolika shotha, Rohini, Shankhak. Akshiroga, Pratishyaya, Mukharoga, Karnaroga, Kanthodhwansa, Kashayashyata, Ghrananasa, Ashabdashravana, Karnashoola, Vartmastambha, Timira, Shiroruk, Galapaka, Mukhashrava, Shirashshoola and Peenasha, etc. Kavalagraha and Gandoosha help to cure foul breath, mouth infections,

dental caries, tonsillitis, laryngitis and pharyngitis. Shiropichu, Shirobasti and Shirodhara, etc. are used for the management of refractive headaches and migraine.

Under Nasagata Rogas total 31 rogas are explained in Sushrut Samhita, among them Apeenasa is one. In this disease Kapha Dosha is a main causative factor and Vata is associated Dosha.

पूर्वोद्दिष्टे पूतिनस्ये च जन्तोः स्नेहस्वेदौ छर्दनं संसनं च ।
युक्तं भक्तं तीक्ष्णमल्पं लघु स्यादुष्णं तोयं धूमपानं च काले ॥

(Sushruta Samhita, Uttar Tantra 23/3)

अपीनसपूतिनस्ययोश्चिकित्सामाह- पूर्वोद्दिष्टे इत्यादि। पूर्वोद्दिष्टे अपीनसे इत्यर्थः। छर्दनं वमनं, संसनं विरेकः।
कृतशुद्धेरन्तःसंसर्गं नियमयन्नाह- युक्तमित्यादि। तोयस्य पानं नियमयन्नाह- उष्णं तोयमित्यादि। काले धूमपानकाले॥३॥

निबन्धसङ्ग्रह व्याख्या (डल्हण कृत)

The mainstay of treatment for AR is conservative. Medications and therapy may be locally or systemically administered. Nasal irrigation and douches. An ideal alkaline nasal douche mixture consists of 28.4 g of sodium bicarbonate (helps in dissolution of crusts), 28.4 g of sodium diborate (acts as an antiseptic, is also bactericidal as an acid, and helps to buffer the bicarbonate in the mixture) and 56.7 g of sodium chloride (makes the solution isotonic). One teaspoonful of the above mixture (pulverized triborisis) in about half a pint (280 ml) of luke-warm water is used to douche the nasal cavities vigorously to clear off the crusts. This can be done three or four times a day using a 10 or 20 cc syringe, nasal catheters, douche rubber bulbs, douche cans or siphon bags, asepto syringes, Birmingham glass syringes, fountain syringes, Higginson syringes or enema cans, or even by snuffling up the solution through the nostrils.

शिरोगुरुत्वमरुचिर्नासावस्तनुस्वरः ।
क्षामः ष्ठीवति चाभीक्ष्णमामपीनसलक्षणम् ॥

(योगरत्नाकर)

आमलिङ्गान्वितः श्लेष्मा घनः खेषु निमज्जति ।
स्वरवर्णविशुद्धिश्च पक्वपीनसलक्षणम् ॥

(योगरत्नाकर)

कफः प्रवृद्धो नासायां रुद्ध्वा स्रोतांस्यपीनसम् ।
कुर्यात्सघुर्पुरं श्वासं पीनसाधिकवेदनम् ॥
अवेरिव स्रवत्तस्य प्रक्लिन्ना तेन नासिका ।
अजस्रं पिच्छिलं शीतं पक्वं सिंघानकं घनम् ॥

(योगरत्नाकर)

Sinusitis is defined as the inflammation of the mucosa either of any one or all of the paranasal sinuses. In humans, there are four paired sinuses which are termed as paranasal sinuses and they are maxillary, frontal, ethmoid and sphenoid sinuses. Ayurveda being an ancient holistic science aims at alleviating the disease and protection and prevention of the positive health. Shalakya Tantra is one of the Astangas of Ayurveda that deals with the Uttamanga and the diseases related to Urdhvajatru. Paranasal sinusitis, the most common disease in Shalakya tantra can be correlated to the disease Apeenasa, Peenasa, Dusta Pratishyaya etc in Ayurveda based on its signs and symptoms. Apeenasa and Peenasa are used interchangeably for paranasal sinusitis in Ayurveda and they are managed with Deepana Pachana, Vamana, Virechana, Dhumapana, Nasya Karma or Shirovirechana. Nasya Karma, one of the Panchakarma therapy and the best therapy for the Urdhwajatrugata Rogas plays a vital role in the successful management of the sinusitis. In this therapy, the medicine is administered through nose either in the form of ghee, oil, powder, liquid or smoke. It is particularly useful in the treatment of diseases occurring in the organs situated above the clavicle but indirectly it works on the whole body by improving the functioning of the endocrine glands and nervous system.

यथा दुष्टेन दोषेन यथा च अनुविसर्पितः ।
निर्वृत्तिः आमयस्यासौ सम्प्राप्तिः जातिः आगतिः ॥

(मा.नि.)

तस्माद् व्याधिः जनक दोषव्यापार विशेषयुक्तं व्याधि जन्मेह सम्प्राप्तिः ।

(चक्रपाणि)

आनह्यते यस्य विदूष्यते च पापच्यते प्रज्वलतीव नासा ।

न वेति यो गंधरसाश्च जंतुं जुष्टं व्यवस्येत् तमपीनसेन ॥

तं चानिलश्लेष्मभवं विकारम् ब्रूयात् प्रतिश्यायसमानलिङ्गम् ।

- सुश्रुत उत्तर स्थान २२

पूर्वोद्दिष्टे पूतिनस्ये च जन्तोः स्नेहस्वेदौ छर्दनं संसनञ्च ।

युक्तं भक्तं तीक्ष्णमल्पं लघुस्यादुष्णं तोयं धूमपानञ्च काले ॥
सुश्रुत चिकित्स स्थान

In Ayurveda, the term sinusitis is referred to as either Peenasa or Apeenasa which is described as a Vata-kaphaja Krichasadhya Vyadhi. Some authors opine that both Peenasa and Apeenasa are one and the same and some are of different opinion. In both these conditions, therapies that have been mentioned above will be very effective if applied after the proper diagnosis and assessment. In the Srilankan Medicine, the Apeenasa which occurs as a complication of Dusta Pratishyaya is termed as Peenasa. Both the terms Peenasa and Apeenasa have been used interchangeably. Charaka Samhita and Susruta Samhita describe Samshamana Karma especially Deepana, Paachana, and Langhana to be administered to patients suffering from Apeenasa. In Charaka Samhita and Susrutha Samhita, it is advised to conduct Vamana Karma, Virechana Karma, Aasthapna Vasti and Nasya Karma in the management of Apeenasa. Sri Lankan traditional physicians perform Rakta Mokshana using leeches on nasal polyps which may occur as a complication of Peenasa. Sweda Karma, Dhoomapana, Gandoosha, Kawalagraha, Karna Poorna, Anjana Karma are also carried out as therapeutic measures. Additionally, Hisgellum, Engagellum, Veidu and Nila Vedakama are used as therapeutic measures in management of Peenasa by traditional physicians.

DISCUSSION

Apeenasa presents with nasal obstruction, sometime dry and sometime wet nose, absence of smell and taste sensation, noisy breathing, thick and yellow coloured discharge from the nose. Other Nasagata Rogas include Pootinasa that presents with foul smell through the nose and mouth and Dustapratishyaya with obstructed nose or open nose, wet or dry nose and the loss of smell sensation.

In Ancient Ayurvedic science, we find many therapies like Nasya Karma, Akshitarpana (local therapy for eyes), Putapaka (local therapy for eyes) etc which is said to be very effective in the management of Nasagata and Shirogata Rogas (diseases of head). Nasal route of drug administration is the natural choice for the treatment of Nasagata Rogas (local nasal disorders) as well as other supraclavicular diseases. In this therapy, the medicine is administered through nose either in the form of ghee, oil, powder, liquid or smoke. It is particularly useful in the treatment of diseases occurring in the organs situated above the clavicle but indirectly it works on the whole body by improving the functioning of the endocrine glands and nervous system.

Apeenasa is one of the Nasagata Roga and an Urdhvajatrughata Vyadhi. Nasa is said to be the main doorway to Shiras and hence Chikitsa of Urdhvajatrughata Vyadhis are applicable in the management of Apeenasa too. The treatment of these Nasagata Rogas includes Deepana pachana, Snehana, Swedana, Vamana, Virechana, Dhoomapana, and Nasya. Dietetic instructions include Tikshna, Laghupaki Ahara and Ushnajalapana. Deepana-Pachana The importance of Deepana-Pachana drugs is to bring the Sāma Dosha to Nirāma state. Thus Deepana-Pachana should be administered in the beginning of the Snehana therapy depending upon the conditions, when it arises. Deepana Pachana drugs are used to increase the Agni and for the digestion of Ama. Sinusitis is condition associated with infection & inflammation in sinus mainly triggered by allergic reaction. Sinus infection caused by virus and bacterium, etc. Common cold, allergens like pollens and pollutants can block sinuses by impairing drainage of mucus and leads swelling of tissue lining. Large number of population suffered by sinusitis world widely and this is considered common health issue of nasal or respiratory system. The symptoms of sinusitis are headache, pain, facial tenderness, fever, nasal discharge, nasal stuffiness and sore throat. Nasashrava, Shirashoola, Shirogauravam, Ghranauparodha, Jwara, Kaphotklesh, Swarbheda, Kasa, Aruchi, Klama, Swasa and Rajyakshma, etc. are major symptoms of sinusitis and nasal infections. The Vataja and Kaphaja Pratishyaya (allergic rhinitis) mainly affects common peoples and other forms of Pratishyaya are rarely seen in common clinical practice.

The common etiologies include exposure to allergens, diversified climatic condition, suppression of natural urges and awful conduct of Ahara-Vihara. The common features of Pratishyaya are heaviness in head, repeated sneezing, body-ache and cough & cold, etc. Doshas and Sinus Infection The unites of four pair of sinuses are called as “paranasal sinuses” which includes Frontal sinus (in forehead), Maxillary sinus (behind cheeks), Ethmoid sinuses (between the eyes) and Sphenoid sinus (deep behind the ethmoids). Inflammation within paranasal sinuses leads sinusitis.

Atrophic rhinitis (AR) is a debilitating chronic nasal mucosal disease of unknown aetiology. The condition is characterized by progressive nasal mucosal atrophy, progressive atrophy of the underlying bone of the turbinates, abnormal widening/patency of the (roomy) nasal cavities (with paradoxical nasal congestion) and formation of viscid secretions and dried crusts leading to a characteristic fetor (ozaena). AR is sometimes referred to as coryza foetida, atrophic catarrh, rhinitis atrophicans, acute necrotizing rhinitis or rhinitis chronica foetida. The primary form of the disease is also known as ‘ozaena’ (a stench) because of the characteristic foul smell emanating from the nasal passages. ‘Subacute’ and ‘acute’ forms of atrophic rhinitis and ‘simple’ and ‘ozenous’ atrophic rhinitis have also been described.⁶ Epidemiology Primary atrophic rhinitis has decreased markedly in incidence in the last century and this is probably

related to the increased use of antibiotics for chronic nasal infections. The reported prevalence of primary AR ranges from 0.3 to 1 per cent of the population in those countries with a high prevalence. The disease is extremely common in swines and cattle and is described as 'progressive atrophic rhinitis'. It has been studied extensively in these animals and several treatment forms including vaccines have been evaluated. The porcine model has been used for evaluating the pathophysiology of this disease. The condition is unlikely to occur before puberty. It is prevalent predominantly in young and middle-aged adults. Several authors have reported a predominance in females (M:F ratio 1:5.6). It is a common condition in tropical countries such as India, Pakistan, China, Philippines, Malaysia, Saudi Arabia, Egypt, Central Africa, Eastern Europe (Poland), Greece, Mediterranean areas and Latin and South America. The incidence of AR is low in the natives of equatorial Africa.² In one study, the significance of environmental factors was reinforced by the findings that 69.6 per cent of the patients were from rural areas and 43.5 per cent were industrial. The disease appears to be more common in the lower social classes, poor populations and those living in poor hygienic conditions.

Atrophic abnormalities of the nasal mucosal and osteochondral structures (the turbinates, septum and sinonasal walls) can profoundly alter nasal physiology and thus impair the organ's respiratory, secretory, ciliary and olfactory functions. These structural alterations are probably related to a combination of genetic and environmental factors and result in chronic inflammation, impaired drainage of nasal secretions and bacterial colonization - all of which may profoundly alter the patient's quality of life. Porcine progressive AR which serves as an animal model of the human condition is thought to be caused by infectious and toxic phenomena involving thermolabile exotoxins from *Pasteurella multocida* (together with *Bordetella bronchiseptica*, in some cases). By combining the results of clinical, endoscopic, imaging and additional investigations if necessary, it may be possible to differentiate between Primary or idiopathic forms of AR in which chronic progressive mucosal and osteochondral lesions of unknown aetiology may significantly impair quality of life and Secondary forms in which AR is a manifestation of a local, locoregional or systemic disease process or an after-effect of sinonasal surgery, craniofacial radiotherapy or traumatic or chemical injury. Primary Forms of AR Primary AR (also known as ozaena) has become increasing rare over the last century. Middle-aged patients (particularly those of Mediterranean, Indian, Chinese or African ethnicity) may develop an atrophic process that involves the nasal structures (often extending to the nasopharynx) and is associated with crusting and disabling anosmia. *Klebsiella ozaenae* and (sometimes) *Corynebacterium diphtheriae* are frequently present, although the organisms' aetiological roles remain subject to debate. Rare cases of ozaena have been reported in children. Non-ozaenic primary AR can affect adults and children and may in some cases be familial or congenital, with turbinate agenesis or hypoplasia; malformations of the sinonasal walls and sinuses; congenital anosmia or primary dystrophic rhinobronchial mucosa.

However, the aetiology of primary AR is unknown, the diagnosis is essentially clinical and one of exclusion of other conditions that may produce atrophic features secondarily. Overall, it refers that the Atrophic rhinitis is an infectious disease of swine characterised by serous to mucopurulent nasal discharge, shortening or twisting of the snout, atrophy of the turbinate (conchal) bones and reduced productivity, that may occur enzootically or more sporadically, depending on a variety of factors including herd immunity. The most severe progressive form is caused by infection with toxigenic strains of *Pasteurella multocida* alone or in combination with *Bordetella bronchiseptica*. Infections with *B. bronchiseptica* alone can cause a mild to moderate form with nonprogressive turbinate bone atrophy. Turbinate atrophy may only be obvious at slaughter or may be detected in the live animal by use of radiography or tomography. Environmental and management factors also contribute to the severity and incidence of this disease.

CONCLUSION

Apeenasa is a first and foremost among the different types of Nasagata Roga described by Sushrut. There is vitiation of pitta and Kapha Dosha characterized by nasal obstruction, running nose, dryness of nose, anosmia and loss of taste and foul smell emanating from nasal cavity. This condition can be co-related with Atrophic rhinitis because most of the signs and symptoms are similar. Atrophic rhinitis is a chronic disease of nasal mucosa. The disease is characterized by abnormally wide nasal cavities, and its main symptoms are dryness, crusting, atrophy, fetor, and a paradoxical sensation of nasal congestion. Atrophic rhinitis is the most common type of chronic rhinitis, affecting 10 to 20% of the population, and evidence suggests that the prevalence of the disorder is increasing. Chronic Atrophic rhinitis has been associated with significant impairment in quality of life, sleep and work performance.

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