MANAGEMENT OF ASYASHOSHA W.R.T XEROSTOMIA – A CASE STUDY

1Sandhya Rani, D*, 2Partha Sarathy Kulkarni

1Reader, Dept, of Shalakyatantra, JSS Ayurveda Medical College, Lalithdripura Road, Alanahalli, Mysuru-570028, Karnataka, INDIA

2Physition, Arvinda Hospital, Mysuru, Karnataka, INDIA

ABSTRACT
Asyashosha or xerostomia is a condition in which there is dryness of the oral cavity with difficulty in swallowing, chewing the food, loss of taste, diminished sensation & difficulty to speak. The normal salivary secretions in oral cavity are reduced because of inactive salivary glands, taste buds & nerve supply. Xerostomia may be the result of any chronic disorder or a side effect of drugs or therapy. In the present study the cause of xerostomia is radiotherapy to the tongue because of which there is degeneration of salivary glands, taste buds & nerve supply. The treatment adapted is shodhana in the form of Virechana & Nasya karma, sthanika chikitsa as kshera dhooma & jihwa nirekhana. The results were appreciating & encouraging. Patient got relief from dryness of mouth with slight improvement in taste perception & sensation.

Keywords: Asyashosha, Xerostomia, Virechana, Nasya Kshera dhooma.

Corresponding Author
Dr. Sandhya Rani, D
Reader, Dept. of Shalakyatantra,
JSS Ayurveda Medical College,
Lalithdripura Road, Alanahalli,
Mysuru-570028, Karnataka, INDIA
Email: sandhyaranid30@yahoo.in
Phone: +91 9448584801

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INTRODUCTION

Xerostomia is defined as dry mouth resulting from reduced or absent saliva flow. Xerostomia is not a disease, but it may be a symptom of various medical conditions, a side effect of a radiation to the head and neck, or a side effect of a wide variety of medications. It may or may not be associated with decreased salivary gland function. Xerostomia is a common complaint found often among older adults, affecting approximately 20 percent of the elderly. However, xerostomia does not appear to be related to age itself as much as to the potential for elderly to be taking medications that cause xerostomia as a side effect [1].

Anatomy of Tongue: It is a muscular organ helps in taste perception, speech, mastication and swallowing. It occupies most of oral cavity and oropharynx. It is innervated by 5cranial nerves. The median sulcus separates the tongue into right and left halves. The dorsal surface is rough due to presence of taste buds (filiform, ungiform, vallate papillae) which helps in taste perception. The ducts of salivary glands also open into the tongue [2].

The three main salivary glands are:
1. Parotid Glands
2. Submandibular Glands
3. Sublingual Glands
Salivary function is mediated by the muscarinic M3 receptor. Stimulation of this receptor results in increased watery flow of salivary secretions. When the oral mucosal surface is stimulated, afferent nerve signals travel to the salivatory nuclei in the medulla. The medullary signal may also be affected by cortical inputs resulting from stimuli such as taste, smell, anxiety or depression. Efferent nerve signals, mediated by acetylcholine, also stimulate salivary glandular epithelial cells and increase salivary secretions [3].

Saliva components
Saliva contains two major types of protein secretions, a serous secretion containing the digestive enzyme ptyalin and a mucous secretion containing the lubricating aid mucin. The pH of saliva falls between 6 and 7.4. It contains large amounts of potassium and bicarbonate ions, and to a lesser sodium and chloride ions. In addition, saliva contains several antimicrobial constituents, including thiocyanate, lysozyme, immunoglobulins, lactoferrin and transferrin.

Function of saliva
- Keeps the oral mucosa moist & pliable
- Cleansing action by helping to wash the food particles & debris.
- Solvent action on food for bolus formation & for easy passage through the digestive tract.
- Digestive action through enzymes such as alpha amylase & maltase.
- Facilitates swallowing of food.
- Antimicrobial activity due to presence of lysozyme, thiocyanate, hydrogen peroxide, lactoferrin etc.
- Excretion of various drugs, metals & other substances.
- Effect on wound healing through speeding blood coagulation.
- Prevention of oral infection by its immunoglobin activity.
➢ Helps in maturation & remineralization of enamel due to presence of calcium, phosphate, fluoride, & proteins [4].

**Patients with xerostomia complain of:**

➢ Dryness of mouth, throat.
➢ Difficulty in chewing, speaking, swallowing the food.
➢ Taste disorders (dysgeusia),
➢ Painful tongue (glossodynia)
➢ An increased need to drink water, especially at night.
➢ Xerostomia can lead to markedly increased dental caries, parotid gland enlargement,
➢ Inflammation and fissuring of the lips (cheilitis)
➢ Inflammation or ulcers of the tongue and buccal mucosa,
➢ Halitosis and cracking and fissuring of the oral mucosa.

**Other systemic diseases that can cause xerostomia include:**
Rheumatoid arthritis, diabetes mellitus, hypertension, cystic fibrosis, bone marrow transplantation, endocrine disorders, nutritional deficiencies, nephritis, thyroid dysfunction and neurological diseases such as Bell's palsy and cerebrapalsyral candidiasis, salivary gland infection (sialadenitis), Dehydration resulting from impaired water intake, emesis, diarrhea or polyuria can result in xerostomia. Psychogenic causes, such as depression, anxiety, stress or fear, can also result in xerostomia. Alzheimer's disease or stroke may alter the ability to perceive oral sensations. Dry mouth is often exacerbated by activities such as hyperventilation, breathing through the mouth, smoking or drinking alcohol. Trauma to the head and neck area can damage the nerves supplying sensation to the mouth, impairing the normal function of the salivary glands.

**CASE STUDY**

OP NO: of JSSAMCH, Mysuru
An adult male of 47 yrs, moderately built & nourished attended Shalakya OPD with the complaint of dryness of mouth, difficulty in swallowing, chewing, & speech since 3 months. By history- pt underwent surgical excision of a malignant tumor of left lateral border of tongue 4 months back & took radiation to tongue for 21 days, after which he developed the present complaint. 0/E- dry oral mucosa, with cracked tongue. Slurred speech with halitosis.

**TREATMENT ADOPTED**
Sadyo virechana is followed:

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2 days – deepana pachana

3rd day- Snehapan with sukumara grutha.

4th day- sarvanga abhyanga and bashpa sweda.

5th day- virechana with trivruth lehya.

6th day- samsarjana krama.

7th day- vishrama kala.

8-14th day –nasya with ksheerabala 101 taila & ksheeradhooma with kshera & bala moola kashaya.

All 15 days jihwa nirlekhana with tamarind powder.

DISCUSSION

Xerostomia is a condition in which there is dryness of mouth resulting from reduced or absent salivary flow. The normal moisture of oral cavity is lost, leading to difficulty in speech, chewing & swallowing the food etc. Normal salivary function is mediated by the muscarinic M3 receptor. Stimulation of this receptor results in increased watery flow of salivary secretions. When the oral mucosal surface is stimulated, afferent nerve signals travel to the salivatory nuclei in the medulla. The medullary signal may also be affected by cortical inputs resulting from stimuli such as taste, smell, anxiety or depression. Efferent nerve signals, mediated by acetylcholine, also stimulate salivary glandular epithelial cells and increase salivary secretion. When this sequence is disturbed, it results in xerostomia. Ayurveda is a life science in which the nidana, samprapthi, & chikitsa of various diseases has been explained. By seeing the symptoms, xerostomia can be correlated to mukhashosha or talu shosha or asyashosha, where dryness of mouth is the prime symptom.

CANCER THERAPY

Acute xerostomia from radiation is due to an inflammatory reaction, while late xerostomia, which can occur up to one year after radiation therapy, results from fibrosis of the salivary gland and is usually permanent.16 Radiation, causes changes in the serous secretary cells, resulting in a reduction in salivary output and increased viscosity of the saliva. A common early complaint following radiation therapy is thick or sticky saliva. In the present case, the cause of xerostomia is radiotherapy. The patient has taken radiotherapy for 21 days to the tongue, by which the salivary glands, nerves supplying to the tongue and taste buds have become inactive. There may be death of some of these cells leading to dryness, loss of taste & reduced sensation in oral cavity.
The pathogenesis may be shown as follows:
Radiotherapy→Death of Salivary glands → Nerve damage → Inactive Taste buds → Reduced saliva → reduced impulses→ loss of taste leading to XEROSTOMIA.
As per principals of Ayurveda, Samprapthi vigyanam eva chikitsa.
Our treatment should aim at rejuvenation of salivary glands, stimulation of nerves, and activation of taste buds.
Kaya shodhana by virechana to remove the dooshita dosha. Abhyantara & sthanika snehana helps to reduce rukshata in the body and pacify vata dosha [5].
The mode of action of Nasya in jatrudwa vikaras has been well understood as it stimulates certain centres in brain, & there by brings desired effect [6].
Ksheeradhooma, dhooma with kshera and bala mula kashaya is one of the best brumhana chikitsa [7] which can normalize bodhaka kapha vikruti.It stimulate the nerve endings, taste buds & salivary glands.
Jiwha nirlekhana with tamarind is proved to be best sailogogue.

CONCLUSION
Xerostomia is a condition of dryness in mouth. By seeing the signs & symptoms we can correlate it to mukhashosha or asyashosha or talu shosha where dryness of mukha is the prime symptom.
As shosha is a vata pradhana vyadhi, chikitsa is aimed in pacifying vata dosha. Sthanika abhyanga & sweda helped in improving circulation, nasya helps to stimulate the centres in brain.
Ksheeradhooma, where kshera and bala moola are best brumhana dravyas and dhooma can stimulate the cells. Jiwha nirlekhana with tamarind has proved to be best sailogogue (drugs which increases saliva). The treatment has been effective in reducing symptoms of dryness & beneficial in improving the general condition. Ayurveda could improve the quality of life apart from reducing the signs and symptoms.

REFERENCES