

## XEROSTOMIA

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**Abstract :** Xerostomia is a dry mouth which may result from decreased or absence in salivary flow leads to mucosal dryness. It is a subjective feeling of oral dryness. People with xerostomia, complain of problem with swallowing, deglutition, phonetics, wearing denture etc. Xerostomia has a significant effect on patients quality of life. So people with xerostomia need special care for maintenance of good oral & general health.

**Keywords** - Dry mouth, Xerostomia, Salivary Flow, Antidepressants, Antipsychotics.

### Introduction

Saliva plays an important role in maintaining good oral and general health. Approximately 500 ml of saliva are secreted daily, mostly during eating, drinking and very little at night. Rates vary greatly between individuals.<sup>1</sup> Xerostomia, commonly referred to as dry mouth syndrome, it is a result of reduced or absent salivary flow producing mucosal dryness. Saliva can reflect the current condition of body and is a very important health indicator. Saliva is a clear, watery, viscous fluid with a pH approximately of 6-7. Saliva is mostly secreted from the parotid, submaxillary, sublingual and small mucous glands of the mouth.<sup>1</sup>

### Signs & Symptoms :-

#### Signs:-

Dry, Cracked & peeling lips, Dry & coarse tongue, cracks in the corners of the mouth, Dental decay, Dental erosion, Erythematous tongue, Swelling of salivary glands, Mucositis, Oral candidiasis, Oral ulcers etc.<sup>2,3</sup>

#### Symptoms:-

Difficulties while swallowing & chewing dry food, Sensitivity to spicy food, Altered -salty, bitter, metallic taste in mouth, Burning sensation, Lack of taste perception, Coughing episodes, Voice disturbance, Nocturnal discomfort etc.<sup>2,3</sup>

### Clinical Features:-

Xerostomia is a subjective sensation of dry mouth & it is diagnosed through self report. Patients having unpleasant, altered taste perception, bad breath, increased incidence of infections like oral thrush, oral ulcers. Xerostomia causes dysphagia & dysarthria by affecting patients quality of life.<sup>3</sup> Xerostomia shows cracked dry lip, fissured tongue, burning sensation. Due to reduced salivary flow & decreased flushing activity xerostomia patient shows considerable accumulation of plaques & calculus which leads to periodontal disease. Xerostomia has a devastating effect on denture wearers by affecting the retention & comfort of prosthesis. Thus, xerostomia has a direct impact on oral and general health.<sup>3</sup>

### Causes:-

The common causes of dry mouth include radiotherapy to head & neck for cancer treatment. Physiological cause of dry mouth such as anxiety, mouth breathing, panic attacks may cause dry mouth due to the stress.<sup>4</sup>

There are so many drugs associated with xerostomia such as Anticholinergic drugs, Cytotoxic drugs, Antidepressants, Antihypertensive, Muscle relaxants agents, Antireflux agents-proton pump inhibitors, Atropine, Diuretics, Beta blockers. There are variety of causes which is divided into two main categories:- Direct causes & Indirect causes.<sup>4</sup>

**Direct causes/Primary causes:** Are the conditions which directly affects the salivary glands & decreases the salivary flow rate. For example autoimmune disease like Sjogrens syndrome, characterized by inflammation of exocrine glands. Direct causes also includes Type 1 & 2 diabetes mellitus, Thyroid disease, Adrenal conditions, Renal & hepatic disease, HIV.<sup>4</sup>

**Indirect causes/Secondary causes:-** Irradiation & cytotoxic drugs causes irreversible damage to acinar cells. Xerostomia is also a side effect of variety of other autoimmune disorders, rheumatoid disorder, Scleroderma, some habits like alcohol consumption, smoking tobacco.<sup>4</sup>

### **Salivary flow Assessment:-**

There are different methods used to evaluate the salivary gland secretion & dry mouth. Diagnosis of xerostomia can be made by detailed patients history, examination of oral cavity, Mouth mirror test etc. In mouth mirror test, back of mouth mirror is drawn along the buccal mucosa & the friction is registered accordingly. Salivary scintigraphy helps in assessing salivary gland function. Sialometry measures the salivary flow rate. It is most objective method to assess salivary function.<sup>5,6</sup>

Sialography demonstrate ductal structures, detect salivary gland calculi & masses & also find application in the identification of long standing xerostomia. Ultrasonography demonstrates acinar & ductal structures. It recommended that the correct diagnosis of dry mouth required clinical investigation of oral cavity, along with saliva measurement.<sup>5,6</sup>

### **Treatment:-**

For treatment of xerostomia proper patient education & identification of proper cause is very important.

As a preventive measures examination and evaluation of oral cavity for every 4-6 months is necessary. Uses of low-sugar diet, topical fluoride are efficient ways of preventing hyposalivation-induced dental caries. It is important to avoid irritants such as coffee, alcohol

or tobacco smoking. The patients are suggested to sip water frequently to provide relief and moisture to dry mouth symptoms.<sup>7</sup>

Salivary substitutes are used for humidify the oral cavity & replace lost salivary function. Milk helps in moistening & lubricating the oral mucosa, buffering oral acids, reducing enamel solubility & contributes to enamel remineralization as it contains calcium, phosphate that adsorb to enamel hence, it is recommended as a salivary substitute.<sup>7</sup>

Topical agents are used for subjective and objective improvement in the signs and symptoms of xerostomia. Also lubricating agents in the form of gels, mouthwashes, lozenges and toothpaste have been used.<sup>7</sup>

An immunological agent such as parenteral administration of interferon increases the salivary and lacrimal flow in primary & secondary Sjogren's syndrome patients by increasing the transcription & production of aquaporin-5 which is a membrane-bound protein. Corticosteroid irrigation with prednisolone 2 mg/ml in normal saline is clinically helpful by increasing the salivary flow rates in early stages of disease. Systemic corticosteroids may be of beneficial in reducing the oral and ocular symptoms of Sjogren's syndrome.<sup>7</sup>

Psychological factors causing xerostomia must be evaluated and treated at proper time is important. Use of benzodiazepines such as ketazolam 15-30 mg at bed time, followed by gradual dose reduction is advised.<sup>7</sup>

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