



Libyan International Medical University
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Xerostomia
Diagnosis&management

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Abstract :-

Xerostomia is the subjective sensation of dry mouth, which is often (but not always) associated with hypofunction of the salivary glands. The term is derived from the Greek words ξηρός (xeros) meaning "dry" and στόμα (stoma) meaning "mouth".

Introduction :-

Xerostomia is the subjective perception of oral dryness. It is associated with dysfunction of the salivary glands. Xerostomia and salivary gland dysfunction are most commonly due to: pharmaceuticals, systemic disease (ie, Sjögren's syndrome), radiation therapy, dehydration, and emotional stress. There may be various degrees of salivary hypofunction depending upon the etiology; in some severe

cases there may be complete lack of salivary function. This article discusses the etiology of xerostomia and the dentist's role in the diagnosis and clinical management of this condition.

Discussion:-

study of saliva and its tooth-protective components reveals at least four important functions of saliva: (1) buffering ability, (2) a cleansing effect, (3) antibacterial action, and (4) maintenance of a saliva supersaturated in calcium phosphate. The normal salivary flow is approximately 0.3 to 0.5 ml/minute

The common symptoms of dry mouth include a dry, sticky feeling in the mouth and throat, and increased frequency of thirst.¹ Dry mouth causes difficulty in swallowing, speaking, chewing, and wearing dentures. There may be a change in taste sensation, and patients frequently complain of a burning or tingling sensation in the mouth, especially of the tongue.¹ Intraorally there may be sores on the oral mucosa; fissured tongue or dry, red, raw tongue; increased susceptibility to oral candidiasis; and cracked corners of the mouth and lips. Dry mouth also may result in rampant decalcification of enamel, cervical dental caries, and acid erosion, as well as increased accumulation of bacterial plaque and associated gingival inflammation and periodontal disease, and halitosis.

To confirm the diagnosis of dry mouth, patients should be questioned in greater detail about their dryness. Questions which focus on oral activities dependent on salivation, such as chewing and swallowing, help in identifying patients with salivary hypofunction. As part of diagnosis, the dentist should check for the type of saliva; for example, thick ropy saliva and absence of salivary pool in the floor of the mouth is indicative of decreased parotid function and a qualitative salivary disorder. Patients who have the clinical manifestations of dry mouth and (or) etiology of dry mouth should be asked the following questions: Do you sip liquids to aid in swallowing dry foods? Does your mouth feel dry when eating a meal? Do you have difficulties swallowing any foods? Does the amount of saliva in your mouth seem to be too little? Does your nose or throat feel dry and tickly? Do you have a dry cough, hoarseness, nosebleeds, or a decreased sense of taste or smell? Dry mouth patients who respond positively to these questions and have a lower salivary flow rate (< 0.1 mL/min) are diagnosed as having salivary hypofunction.

Unstimulated and stimulated salivary function tests are used to determine the actual severity of xerostomia. Unstimulated salivary samples require that the patient has ingested nothing by mouth for at least 60 minutes. Unstimulated saliva includes the output of the major and minor salivary glands. When performing the test, patients are instructed to sit upright and allow saliva to accumulate passively in the mouth without swallowing. Patients are instructed to spit the contents of the mouth into a receptacle at one-minute intervals. A collection of at least 5 minutes is recommended. Salivary flow of less than 0.1 mL/min is considered as low salivary flow.

Stimulated saliva is collected by having the patient chew an unflavored gum base or paraffin wax at a rate of 60 chews/min for at least 2 minutes. Salivary output of less than 0.1 mL/min indicates salivary hypofunction.

Another useful means of evaluating salivary function is to apply pressure to the parotid salivary gland in milking the gland. Once the cheek is retracted and the parotid (Stensen's) duct is visualized and the area dried with cotton, milking pressure to the area will express saliva in functioning parotid glands. Milking of the submandibular salivary glands is somewhat more difficult but also feasible. Dry mouth is managed well by having an early diagnosis of the condition and aggressively treating the symptoms. Early diagnosis and treatment can slow progression of dry mouth and improve comfort and productivity.

Xerostomia increases the vulnerability of tooth enamel to dental caries. Patients diagnosed with dry mouth are at high risk for dental caries; thus an extra effort must be made to protect teeth from decalcification and dental caries. Patients diagnosed with dry mouth as well as patients with high caries index should receive a comprehensive intraoral dental exam, and bite-wing x-rays should be performed annually to detect any new carious lesions. To arrest dental caries, patients need aggressive fluoride therapy in the form of professionally applied concentrated sodium fluoride varnishes every 3 months and daily use of prescription strength fluoride toothpaste (PreviDent 5000 Dry Mouth [Colgate-Palmolive Company]). Another consideration is the use of fluoride gel application with trays. Calcium also has a remineralizing effect on dental enamel. A calcium- containing remineralizing oral rinse such as Caphsol (EUSA Pharma) is recommended as well.

Dry mouth causes the oral mucosa to become dry and sore. The use of oral lubricants such as vitamin E or Oral Balance (GlaxoSmithKline) may be helpful to provide comfort to the irritated oral tissues. Patients should be instructed to break the vitamin E capsule and apply its contents topically to the affected oral tissues. The regular use of topically applied oil-based balms or vitamin E-containing balm may provide soothing relief to dry, cracked lips.

Patients should be counseled to avoid any products that can contribute to oral dryness or irritation such as alcohol, caffeine, and tooth whitening products. Alcohol has a drying effect and should be avoided in both beverages and in oral products such as mouthwashes. Caffeine is a mild diuretic which promotes fluid loss and may worsen dry mouth. If possible, patients should avoid or limit items which contain significant amounts of caffeine such as coffee, tea, and certain soft drinks as these are acidic in nature and cause decalcification of enamel. Tooth whitening products should also be avoided as they can be irritating to friable oral tissues. Patients are advised to minimize consumption of carbohydrate containing foods and beverages between meals, especially sticky foods such as cookies, bread, potato chips, gums, candies, and acidic beverages (such as carbonated and sports replenishment drinks), and lemon products as these can cause decalcification of enamel and dental caries. Frequent sips of small amounts of sugar- free fluids, especially water, can be helpful in diminishing the effects of oral dryness. Many patients keep a bottle of water handy to moisturize their tissues.

If patients tend to breathe through their mouth, they should be referred to an otolaryngology specialist to examine for any impediments to normal nasal breathing. The dry ambient air of most modern homes contributes to sensation of dryness. The use of a humidifier, particularly at night, helps address this concern. Patients taking certain medications that result in dry mouth should consult their physician to determine if an alternative medication or dosage is appropriate that may reduce dry mouth and still meet their medical needs.

CONCLUSION:-

It is important to have an early diagnosis and treatment of dry mouth to manage symptoms and slow the progression of disease. Routine follow-up care between the physician and dentist is essential to arrest the progression and severity of dry mouth. Early intervention and individualized management of dry mouth can help improve the quality of life for patients who suffer from dry mouth.

References :-

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