

Evaluation and diet considerations for oral dryness patients

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Saliva has several functions which includes, but is not limited to; mastication, swallowing, cleansing, lubrication, digestion, maintenance of taste perception and tissue repair [1].

Oral dryness is much more common than many seem to people realize. Its effect on oral health indirectly impacts a patient's overall health and wellbeing. Xerostomia is the subjective feeling of a dry mouth whereas patients may complain of dry mouth and have normal levels of saliva production. A lack of saliva can have a devastating effect on the oral hard and soft tissues which includes, but is not limited to, dental caries, oral fungal infections, sialadenitis (salivary gland inflammation), fissured tongue, atrophic tongue, burning mouth, dysguesia (change in taste perception), dysphagia (difficulty swallowing), difficulty chewing, speech, halitosis (bad breath), mucositis (painful inflammation of mucous membrane) and difficulty wearing dentures [2]. Soft tissue damage associated to dry mouth is attributed to the lack of lubrication [1]. Which can also have a significant impact in the patient's quality of life.

There are several factors that can contribute to the feeling of oral dryness. Contrary to previous beliefs, aging has no effect on salivary hypofunction or malfunction. There are three major contributing factors to oral dryness including polypharmacy, systemic conditions, and radiation and/or chemotherapy [2].

The most common systemic causes of salivary gland hypofunction are rheumatoid arthritis and Sjögren's syndrome. Rheumatoid arthritis is a chronic inflammatory disease characterized by joint swelling, joint tenderness, and destruction of synovial joints [3]. Sjögren's syndrome is one of the most common chronic, autoimmune, inflammatory connective tissue disorders characterized by a poly glandular tissue destruction leading to diminished production of saliva and tears [4]. While a diagnosis of rheumatoid arthritis easily reached, diagnosis of Sjögren's syndrome is much more complex.

There are a number of reasons for this delay in diagnosis which include the lack of awareness among physicians and the ability of Sjögren's to mimic other conditions such as rheumatoid arthritis, fibromyalgia, lupus and chronic fatigue syndrome. Another issue that makes Sjögren's difficult to diagnosis is that there is no single test to diagnose it with high sensitivity and specificity. The only factor which has been established is its tendency towards age and sex. Around 90% of patients with Sjögren's syndrome are females and is most commonly seen in the fourth or fifth decade of life. Sjögren's syndrome can also present with lacrimal gland dysfunction and other concerns include an 18% increase in non-hodgkin lymphoma by 18% along with other autoimmune and connective tissue disorders [4].

Dietary recommendation for patients with dry mouth

The goal of dietary management in individuals with Sjögren's syndrome is relief of symptoms and improved eating discomfort. An absence in appropriate management can result in lack of appetite,

weight loss, fatigue, difficulty in chewing and swallowing and oral infections such as candidiasis, and anemia. It has been suggested that nutrient intake may play a role in the development or progression of Sjögren's syndrome. According to clinical trial at Tufts University School of Dental Medicine in 2007 the use of Omega 3 supplements can increase oral and ocular comfort and increase salivary flow in Sjögren's patients [5].

As Sjögren's is an inflammatory disease, an anti-inflammatory, soft and bland diet may help patients. This includes a balanced diet with special emphasis on Vitamin B12 and folate. (Krause's food and Nutrition therapy). A study presented data for 125 patients with Spielmeier-Sjögren's disease. Antioxidant therapy was given to 49 patients. Of these 27 received a combination of vitamin E, vitamin C, methionine and BHT (Anti-Oxidant Butylated Hydroxytoluene). As the disease began to progress, the treatment was altered to a combination of sodium selenite and vitamin E in 14 of the 27 patients. The same therapy was also given to 22 children who had not received previous antioxidant supplementation. The number of positive and negative responses was nearly equal in the 2 treatment groups. However, the quality of the response was better in the selenite group and it has been shown to be possible for several years to stop the deterioration which began during the original therapy [6]. An inverse correlation has been found between levels of 25-hydroxyvitamin D and measures of clinical and immunoinflammatory status which support the notion that vitamin D metabolism may be involved in the pathogenesis of primary Sjögren's syndrome [7].

A nonacidic, anti-inflammatory diet with antioxidants may help patients. As swallowing can be a challenge, special emphasis should be made on eating moist food, and avoiding extremities in temperature. A key concept is to combat the dryness while swallowing; here are a few suggestions that may aid the patient in chewing and swallowing:

- Select soft, smooth, and creamy food, which does not require much chewing like soft rice with dal (lentil soup), Khicchi
- Moisten food before eating with yogurt, curd or mayonnaise
- Patients can also choose a coconut based non-spicy gravy.
- Coconut is non-acidic and can be very soothing in the mouth because of its mild sweetness
- Non-acidic foods like bananas, melons, papayas, mangos, pears, potato's, broccoli, cabbage, bottle gourds, zucchini, and skinless chicken can be included in the daily diet

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- It is recommended to avoid spicy sauces or gravies, instead select non-spicy or bland sauce. Fragrance can be enhanced using various herbs like mint, dill, cilantro, parsley etc.
- Tender chicken / meat can be eaten in the form of stew/non-spicy gravy
- Soups of all kind can be taken (at room temp). Making sure to avoid extreme temperatures
- Custard, pudding, jellies, milkshakes and apple/apricot stew can be consumed
- People with Sjögren's are at an increased risk to dental caries, so oral hygiene should be a high priority as well
- Sjögren's patients also suffer from brain fog. To avoid this, patients should reduce their consumption of alcohol and caffeinated beverages
- Light exercise will help minimize stress and anxiety

Education and awareness can go a long way in helping dry mouth patients have a better quality of life and provide support in coping with daily challenges.

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