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SJOGREN'S SYNDROME IN DENTIST PERSSPECTIVE - A REVIEW

ABSTRACT:

Sjogren's syndrome (SS) is an autoimmune disorder which is responsible for glandular dysfunction most preferably salivary and lacrimal glands, caused mainly by the lymphocytic infiltration of exocrine glands. It can be classified into two, namely Primary Sjogren's syndrome and Secondary Sjogren's syndrome. Primary Sjogren's syndrome (pSS) occurs in the absence of other autoimmune diseases and is characterised by keratoconjunctiva sicca (dry eyes) and xerostomia (dry mouth), collectively called the sicca syndrome. On the other hand, secondary Sjogren's syndrome is associated with other autoimmune diseases such as rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE). The prevalence of SS is estimated to be approximately 3% in subjects 50 years or older, with a female to male ratio of 9:1. Conditions associated with SS include rheumatoid arthritis, lupus erythematosus and scleroderma. The clinical manifestations are often vague and mistakenly interpreted and attributed to other medical conditions or iatrogenic disorders. As such, incorrect diagnosis of SS is common and approximately half of all patients are thought to be undiagnosed.

Key words: Sjogren's syndrome, Autoimmune disorder, Rheumatoid arthritis, Scleroderma.

1. INTRODUCTION:

Discovery of Sjogren's syndrome dates back to `1931 and the disease was named after its discoverer Henrik Sjogren who was a Swedish ophthalmologist[1] "Autoimmune" as the term suggests describes a condition where body's own defense mechanism or immune system turn on each other and attacks its own cells and Sjogren Syndrome is one of such condition. The most common symptoms of the disease are dry eyes or a dry mouth (sometimes both together), and a feeling of tiredness and aching. Apart from its' usual symptoms, dry skin, nose and even vaginal mucosa are also observed. Sometimes this disease may affect other organs of the body, including the kidneys, blood vessels, lungs, liver, pancreas, peripheral nervous system (distal axonal sensory motor neuropathy) and brain.

2. ORAL MANIFESTATIONS:

Sjögren's syndrome bring about mainly dysfunction and destruction of the exocrine glands associated with lymphocytic infiltration and immunological hyperactivity[2]. Research suggests that 88% of Sjögren's syndrome subjects had a reduced salivary flow rate, followed by complaints of xerostomia in the 75 to 92% range [2].Patients with Sjögren's syndrome have a range of major salivary gland involvement, mainly parotid enlargement, but also isolated submandibular gland enlargement[3]. Oral manifestations are encountered with high frequency mainly due to the hypofunction of salivary glands resulting in decreased salivary secretion. Loss of the lubricating, buffering and antimicrobial properties of saliva lends to an amplified incidence of the following conditons:[4]

- Dental erosion
- Dental caries
- Angular cheilitis
- Dry plaque laden coarse tongue
- Erythematous tongue
- Mucositis
- Oral candidiasis
- Halitosis

3. DIAGNOSIS:

Unfortunately, testing and diagnostic criteria for identifying Sjögren's syndrome can be confounding. Diagnosis is difficult and evasive since the clinical signs and symptoms mimic other autoimmune diseases such as lupus and multiple sclerosis [5].Diagnostic standards used are the American European Consensus Group criteria. The criteria consists of 6 different domains:[6]

1. Oral symptoms
2. Ocular symptoms
3. Evidence of oral signs
4. Evidence of ocular dryness
5. Evidence of salivary gland involvement with a positive anti-ro/la autoantibodies (ana)
6. A positive gland biopsy

4. COMMON ORAL COMPLICATIONS:

The first and foremost complication of Sjogren's syndrome is Xerostomia, and dental caries is the most common clinical manifestation. Specifically, root and incisal caries, which are seldom seen amongst the general population, are of greater concern for those with Sjogren's syndrome[3].Another common, painful and often chronic complication of Sjogren's syndrome is oral candidiasis.2 Signs include Angular Cheilitis, atrophy or loss of filiform papillae on the dorsal tongue or erythema of the tongue and other mucosal surfaces; diagnosis should be verified by positive potassium hydroxide slide and/ or positive culture.[2,7]

5. SYSTEMIC COMPLICATIONS:

Non-Hodgkin Lymphoma is the most serious complication of Sjogren's syndrome[8].A predictor of lymphoma development in Sjogren's syndrome is persistent enlargement of parotid glands.[9] Diffuse large B-cell Lymphoma and mucosa-associated lymphoid tissue Lymphoma make up the most common types.[8] While Sjogren's syndrome manifests primarily in females (9:1), male patients with primary Sjogren's syndrome seem to have a slightly higher risk of Non-Hodgkin Lymphoma compared to female counterparts.[8] A parotid biopsy may be indicated for the Sjogren's syndrome patient whose main complaint is persistent parotid gland swelling and lymphoma is suspected[9].Primary Sjogren's syndrome has many clinical parallels with multiple sclerosis. Peripheral neuropathies, especially sensory disturbances, are the most commonly reported. Primary Sjogren's syndrome patients with sensory neuropathy complain of distal, often symmetrical, paresthesia and/or neuropathic pain including burning feet sensations[10]. Cranial nerve involvement is another complication, often impairing the cochlear nerve and causing hearing loss and vestibular symptoms. Sensory trigeminal nerve involvement and facial nerve

involvement are also largely described[[11].Treatment of primary Sjogren's syndrome-related neuropathies are currently non-codified. Analgesics are generally the first line of defense for mild forms of sensory neuropathies;

6. TREATMENT:

Since Sjogren's syndrome has no cure, treatment is symptomatic and supportive. Without sufficient saliva to restore the oral pH and regulate microbial populations, the mouth can rapidly colonize deleterious bacterial, viral and fungal populations. A personalized treatment plan must be developed for the patient by their health care professionals to treat the various symptoms. A preventive oral health plan should include meticulous oral hygiene instructions to improve quality of life, and avoid complications.

- Mechanical toothbrushing 2 to 3 times daily with a prescription fluoride gel containing 1.1% sodium fluoride, or remineralizing dentifrice
- Interdental aids such as a waterpik or proxybrush in addition to flossing
- Dietary counseling
- A complement of chemotherapeutic agents
- More frequent recall care, 3 to 4 month

A recent study found that patients suffering from xerostomia were 3-times more likely to have difficulty eating and required water when swallowing[12].Water is the most easily available and commonly used home remedy for the management of discomfort related to xerostomia by producing some moisture to the oral mucosa and often helping in speech and swallowing[9,12].Professional application of topical 5% sodium fluoride varnish, and daily home fluorides such as 1.1% sodium fluoride prescription dentifrices are preventive strategies which decrease microbe colonization and strengthen tooth enamel—thus making tooth surfaces more resistant to caries.8Oxygenated Glycerol Triester saliva substitute spray was found to be more effective than water based electrolyte spray[13]. Since no commercial saliva substitute has been developed which accurately replicates all essential qualities of natural saliva, attempts should be made to increase the natural flow of saliva as much as possible.17Sugar-free gum, mints and lozenges are advisable in those with residual capacity to encourage increased salivary production[13].

Sjogren's syndrome are associated with the increased occurrence of candida infections[6]. Treatment includes topical antifungal treatments and may be followed by systemic antifungal agents for persistent or recurrent episodes. A typical regimen includes antifungal cream and a pastille, troche or oral suspension of an antifungal 3 to 5 times daily for 1 week, followed by systemictreatment with an azole[14]. For prevention of candidiasis, wearing dentures overnight should be discouraged; dentures should be cleaned and treated daily with benzoic acid, 0.12% Chlorhexidine Gluconate or 1% sodium hypochlorite, as primary Sjögren's syndrome carries a high risk of oral candidiasis and a high frequency of multiple candida infections[15].

7. CONCLUSION:

The role of dental professionals includes the identification of patients who are at risk for oral or systemic diseases. Sjogren's syndrome patients often turn up first to their oral health professional only because of their predominant oral symptoms. Prevention, early diagnosis and treatment are crucial in maintaining oral health. The dental professional must be well aware of the signs and symptoms of xerostomia, and Sjogren's syndrome should be in their differential diagnosis. It subsequently will make it easier for them to assess the case with other health care providers if needed and diagnose the condition faster thus coming one step closure in prolonging patients' quality of life.

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