CASE REPORT
CLINIC TECHNIQUES

Oral Sciences

The Sjögren Syndrome: Control of the Oral Symptoms – A Clinical Case Report

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ABSTRACT: Sjögren's syndrome (SS) is an autoimmune disease, the most common clinical manifestations include xerostomia, xerophthalmia and arthritis The disease prevalence is 0,3 to 5%. The objective of this study consists in reviewing the literature, explaining aspects about Sjögren's syndrome, and reporting methods to relieve the oral signs and symptoms of a 56 year old patient, who has the SS, met at the dental clinic of the Regional University of Blumenau. The patient reported improvement in quality of life after receiving the information, evidencing that the identification of possible carriers of the disease by dentists, guiding them to the necessary medical cares and treating the oral conditions is indispensable.

KEYWORDS – Sjögren's Syndrome, salivary gland, xerostomia.

Cindy Karazawa REHFELDT[1]
Isabel Cristina G. B. ANDRADE [2]

[1]Graduate student of dentistry course of Regional University of Blumenau (FURB), Blumenau, Santa Catarina, Brazil.

[2]Professor of Department of Dental Materials, Operative Dentistry and Dental Clinic, School of Dentistry, Regional University of Blumenau (FURB), Blumenau, Santa Catarina, Brazil.

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Introduction

The Sjörgen's Syndrome (SS) is an autoimmune illness, characterized by the infiltration of lympho-monocitary cells, and which results from the atrophy of the exocrine glandules (1,2,3). Consequently, a decrease or absence of glandular secretions occurs, causing dryness of the skin mucous membranes. The most common clinical symptoms are: xerostomia, xerophtalmia, and the increase of the parotid glandules (3,4).

The illness prevalence is of 0.3 to 5% of the general population, with priority attacking women, nine times but frequent in women than in men (1,2). Usually, the SS has two occurrence peaks: during the third decade of age and after the menopause (4).

Some studies mention the role of various virus in the Sjörgen's Syndrome etiopathogeny, among which the herpes virus, retrovirus, and hepatitis C virus, once they can originate inflammatory replies in the salivary glandules (2).

The high number of women with this illness can justify the possible role of hormones in its etiopathogeny. Although the mechanism of its pathology has been studies since its discovery, the importance of different cell populations of the immunologic system remains inconclusive and it is believed to be a multifaceted auto-immune illness (5).

Sjögren's syndrome can exist in primary or secondary forms. The primary form is presented alone in the absence of other autoimmune disorders, and the secondary is presented together with other autoimmune disorders (3,4).

The articular symptoms, xerostomia and xerophtalmia form the classical triad of the primary Sjögren's Syndrome. This is found in 50% of the patients with a prevalence of about 0.5 to 1% in the general populations. For being a syndrome, the carrier shows intraoral and extra oral symptoms. Among the extra oral symptoms stand out: xerophtalmia, resulting in ocular photo-sensibility; articular problems, causing arthralgia and arthritis; respiratory tract dryness, causing hoarseness and dry cough; interstitial pulmonary fibrosis, causing cough, dyspneia, and possibly interstitial lymphocytic pneumonia; xeroderma, which sometime results in superficial skin desquamation; and vaginal drying, atrophy, and itching (3).

The intraoral symptoms, triggered by the decrease of the salivary glandules secretion, are: dry lips, tongue, and pharynx that result in dolorous sensation, mucosa pain, difficulties in speaking, chewing, swallowing and digesting food (3). The oral mucosa can appear reddish and atrophic (2). Additionally, Gonzáles (3) mentions changes in the voice tone, gustative reduction, dry,

Correspondence: Isabel Cristina Gavazzoni Bandeira de Andrade. FURB - Regional University of Blumenau, Santa Catarina, Brazil. Department of Dental Materials, Operative Dentistry and Dental Clinic. Street: São Paulo, 2171- Campus III, Itoupava Seca- Blumenau- SC – CEP: 89030-000 – BRAZIL. E-mail: iandrade@furb.br

hyperemia and dolorous tongue, halitosis, periodontitis, gingivitis, and caries lesions.

Xerostomia is the sensation of oral dryness, while hypo-salivation is the reduced production of saliva due to the hypo-function of the salivary glandules. Frequently, xerostomia is associated with the decrease of the salivary flux. Saliva is composed of 99% of water and its main electrolytes are sodium, potassium, chlorite, and bicarbonate. The soluble protean salivary components include IgA immunoglobulins, digestive enzymes, such as amylase and lipase, and antibacterial and antifungal proteins, besides the mucins that lubricate and protect the oral mucosa (6).

The salivary secretion has a very important role in maintaining the health of the oral tissues. The salivary flux diminution reduces the self cleaning function performed by the saliva, predisposing the person to dental caries and periodontal illness, besides increasing the chances of oral candida symptoms (2,3,4). Sialometry is an examination that measures the salivary flux, with or without stimulation, for the parotid or for individually bigger salivary glandules, or for the total saliva production within a determined time period.

The diagnosis of Sjögren's syndrome depends on the interaction of various subjective and objective parameters obtained by means of clinical and laboratory approach. In addition to the subjective (xerostomia and xerophthalmia), serum parameters and objective evaluation of the function of the salivary and lacrimal glands are part of the routine diagnosis of the syndrome (7). Biopsy of labial minor salivary glands is performed by a dentist, considered an important diagnostic criterion (8).

The aim of this study is to report the clinical case of a patient with the Sjögren's Syndrome, who was treated in the dental clinic of the Regional University of Blumenau (FURB), and to make a review of the literature on the SS, mentioning methods for to improve the quality of life of patients with this syndrome.

Case Report

The patient, a 56 year old woman, was in dental treatment at Regional University of Blumenau (FURB) since 2004. In 2012, she came to the dental clinic for maintenance and accompaniment of the case (figure 1). In the anamnesis, the patient reported to have the Sjögren's syndrome for 11 years. At the first moment, the dental surgeon has established the diagnosis compatible with the SS, after evaluating the oral signs and symptoms associated with the syndrome, including the labial minor salivary glands biopsy and the microscopic examination result of histological. The results have revealed the presence of numerous lymphocytic focuses permeating the glandular acini. Later the patient was transferred to the rheumatologist who continued the clinical and laboratory research, confirming the diagnosis. Since then the patient makes periodic medical follow-ups. Moreover the syndrome, the patient explains to be suffering from hypertension, depression, osteoporosis, and vitamin D deficiency.

She tells having strong eye discomfort, originated from xerophtalmia resulting from photophobia, and that the responsible physician has recommended the periodic use of artificial tears. In the mouth, the patient complains of mucosa ardor, little saliva, and speaking, chewing, and swallowing difficulty, due to hypo-salivation.

Relative to the oral health, she has a case history of periodontitis, however, currently being controlled. She shows dental calculi on the inferior molars, extrinsic tobacco stains, is an oral breather and takes medicines that have collateral effects of hypo-salivation induction. Moreover, she has a case history of caries, but currently performs good oral hygiene, with 0% gingival blooding and a visible plaque rate of 3.7%.

With respect to hypo-salivation, the patient's saliva is scarce and viscous, and the tongue shows fissures (figure 2). She has lip, tongue, and pharynx dryness, resulting in pain sensation, mucosa ardor, speaking, chewing, swallowing, and food digesting difficulties, as well as frequent cough. With this information, it was opted to carry out the dental treatment and to inform the patient about manners to improve her quality of life. Relative to the xerophtalmia, the use of sunglasses during the dental consultation was recommended, once the patient alleged eye irritation caused by the reflector (figure 3).

With respect to the xerostomia, a clinical test of stimulated sialometry was made, following the parameters: patient in comfortable sitting position and with a two hour fasting; the patient was asked to chew a rubberlike object during 5 minutes; the saliva produced during the first minute was discarded and then collected and measured during the following 5 minutes; the final saliva quantity obtained was of 3 ml, this quantity being divided by 5, referring to the elapsed minutes (figure 4).

The result was a 0.6 ml/minute production, which classifies the patient into the hypo-salivation level. The values are analyzed as follows: normal flux, from 1 to 3 ml/minute; low flux, from 0.7 to 1.0 ml/min; hypo-salivation, less than 0.7 ml/min. The frequent ingestion of water, chewing of chewing gum without sugar, and the use of artificial saliva were indicated for the treatment.

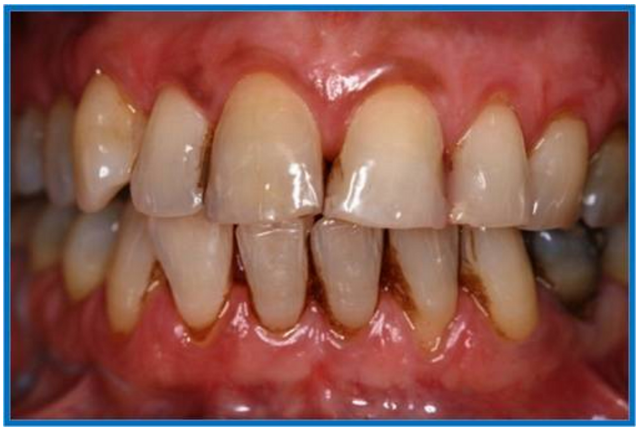

Figure 1: Initial case.

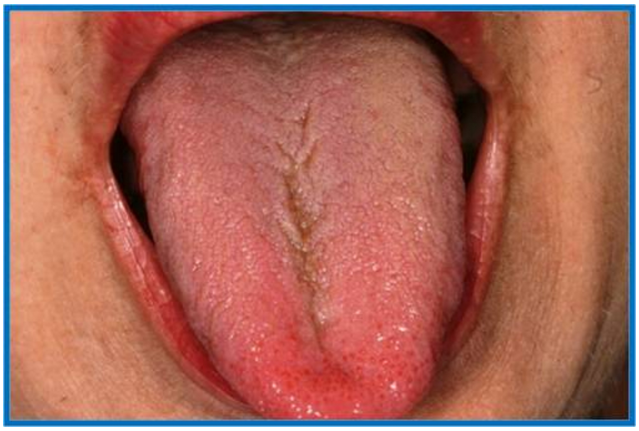

Figure 2 – Fissured tongue.

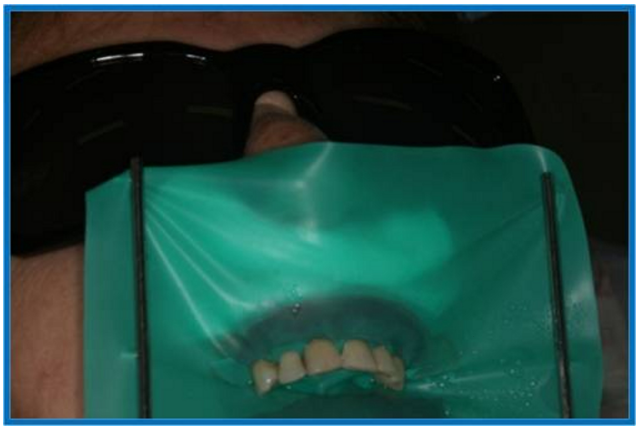

Figure 3 – Use of sunglasses during the dental proceeding.

The predisposition to caries, caused by the demineralization process resulting from the hypo-salivation, is controlled, due to an oral hygiene improvement and frequent visits to the dentist.

During the dental treatment, a supra-gingival scraping, prophylaxis, finishing, and polishing of the current restorations, restoring proceedings, and topic fluorine application, finalizing the treatment, were realized (figure 5).

Relative to the other muscular-skeletal syndrome symptoms shown by the patient, there is a predominance of backache. Therefore, the option was for short dental attendances in order to minimize this discomfort.

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Figure 4 – Quantity in milliliters of saliva produced in 5 minutes.

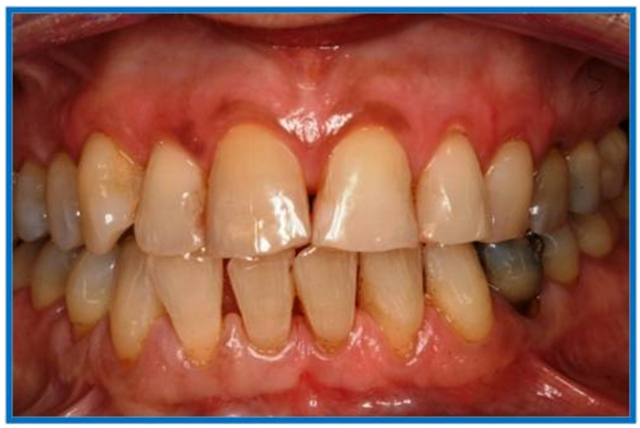

Figure 5 – Final case.

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Discussion

The clinical case of a 56-year-old female patient, carrier of the Sjögren's Syndrome, was reported in this study. The prevalence in female patients of this age group was found in other surveys (1).

The number of women with the syndrome is high, the relation between men and women being 9:1, and can justify the possible importance of hormones in the etiopathogeny (1,2,4). A plausible explication would be the protective effect, which androgenic hormones have in the auto-immunity (2,4).

The criteria used for diagnosis are those recommended by the "European-American Consensus Group" of 2002 and include xerophtalmia and xerostomia symptoms (9).

The making of the syndrome diagnosis is essential for the establishment of the precocious treatment, which is essentially symptomatic, multidisciplinary, and wishes to eliminate the symptoms of eye and oral dryness. The most important specialties in the SS diagnosis are: rheumatologists, ophthalmologists, and dentists, since they make a precocious diagnosis possible and the guiding to an adequate treatment (4). The diagnosis of a series of organic disorders frequently involves the presence of oral symptoms. In this case, the diagnosis of patients was confirmed by a team of health professionals, consisting of a geriatrician, rheumatologist and ophthalmologist and a dentist.

With respect to the syndrome treatment, there is still no definitive therapy. Until now, it consists in alleviating the patient's symptoms (2). Moreover, it must be a multidisciplinary one with the need of a team composed of a rheumatologist, an ophthalmologist, an otorhinolaryngologist, a dentist, and psychologists, what was reported by the treated patient and verified in another study. What determines the protocol to be applied is the symptom intensity. Generally, the symptoms are eased with the use of artificial saliva, collyrium, and steroid anti-inflammatory agents (2).

Analyzing the ocular symptoms, the patient's complains include itching, roughness, pain, and dryness, despite the eyes having an appearance of normality. Such symptoms were reported by the patient. A diminution of lachrymal secretion can produce chronic irritation and destruction of the cornea, as well as bulbar conjunctiva of the epithelium, causing dry keratoconjunctivitis (4). To avoid the ocular discomfort, the use of sunglasses during the dental proceeding was recommended to the patient, since the reflector light was causing her photophobia. Moreover, sometimes the application of collyrium and artificial tears became necessary during the dental treatment, the literature indicating a minimum of three applications a day (2, 10). Also, the use of glasses with closed laterals is indicated to reduce lachrymal evaporation, as well as humidifiers in the patients room (4). This study is concerned with the relief of the patient's oral signs and symptoms, aiming at her well-being during the dental proceeding, and stimulating the improvement of her quality of life, a line of conduct adopted in another study (2).

As the SS is a chronic disease without definitive treatment, the search for drugs that can help alleviating the symptoms must be continuous. Among the recent perspectives for the treatment of dry eyes, the oral use of linseed oil, composed by omega 6 and 3 fatty acids (1 or 2 g a day) was able to improve the symptoms of the epithelial cell conditions of the conjunctive, and to reduce the eye surface inflammation (11). The topical 0.05% cyclosporine, an immune-modulatory agent which inhibits T lymphocytes, reversing the vicious inflammatory cycle by decreasing the secretion of inflammatory mediators and enabling the recovery of lacrimal glandular tissue that is still viable (12), should also be considered. Another promising treatment has been ear acupuncture with SS patients, showing influence on the lacrimal stability and reduction of the cerate conjunctivitis (13).

With relation to the oral symptoms, xerostomia always occurs, with the diminution of the salivary flux reducing the self-cleaning function and the antibacterial properties carried out by the saliva, also predisposing the

person to dental caries and periodontal illness, besides increasing the chances of oral candida or other infections. In this clinical case, the patient had a history of dental caries and controlled candida illness. Recently, the use of chlorhexidine, associated to fluoride varnishes, has been recommended for the control of bacterial plaque in patients with high risk of dental caries and periodontal disease (14).

The oral function is also reduced due to hypo-salivation and this can result in speaking difficulties and dysphagy. The impairment of speaking may be related to the oral dryness and the tongue and palate adherence.

To avoid such problems, brushing and the use of dental floss are extremely important, as well as the auxiliary therapy of fluorine application. In this study, the patient has shown a good oral hygiene with frequent brushing, the use of dental floss, and daily mouth rinsing with 0.05% sodium fluorite, according to the bibliography (3). In accordance with the literature, saliva substitutes are an option for these patients, however, in many cases, they are badly tolerated (2). In the case of patients with persistent symptoms, the use of systemic stimulators, such as secretagogues that stimulate the muscarinic receptors, represented by pilocarpine and cevimeline (2, 3).

Also for the hypo-salivation treatment, the frequent ingestion of water, the local stimulation of salivary secretion with the use of chewing gum without sugar, and the use of artificial saliva were recommended. The traditional treatment of xerostomia has been made with medicines that act as salivary substitutes, or seek to stimulate the salivary flow. A temporary comfort can also be achieved with sips of water. To stimulate the salivary flow, in addition to the well-known chewing gum, new treatments such as acupuncture and homeopathic medicines are available (13). Among the homeopathic medicines, Canova® is designed to stimulate the immune system and there are capsules of willow bark to relieve the feeling of dry mouth and improve the speech.

The recent discovery that serious complications, such as lymphoma and peripheral neuropathy, which are associated with low levels of vitamin D in patients with the SS, opens new ways for understanding the disease and its treatment, being proposed an adequate supplementation (15).

Conclusion

The Sjögren's Syndrome is an auto-immune, chronic, and systemic illness that mainly causes deficiency in the exocrine glandule secretion, basically the lachrymal and salivary ones.

The precocious identification of this illness is particularly important in order to avoid delays in the diagnosis and allowing an adequate clinical evaluation and therapeutic intervention, since the illness impairs the person physically and emotionally. In this aspect, knowledge of the implications of this syndrome is primordial for both the dentist and the patient.

The dentist must know how to identify possible carriers of the illness, to guide them correctly to the necessary medical cares and to treat the oral conditions of the xerostomia, trying to achieve the relief of the symptoms and to orientate the patient in improving his/her quality of life. For the patient, it is important that he/she understands the illness to accept its chronic condition and thus becomes co-responsible for the treatment and realizes his/her self-care. In this clinical case, the patient has reported improvements in her quality of life after the information received and the relief of the signs and symptoms.

Resumo

REHFELDT, Cindy Karazawa; ANDRADE, Isabel Cristina Gavazzoni Bandeira. **Síndrome de Sjögren: Controle das Manifestações Bucais - Relato de Caso Clínico.** Oral Sci., jul/dez. 2013, vol. 5, nº 1, p. 11-16.

A síndrome de Sjögren (SS) é uma enfermidade autoimune. As manifestações clínicas mais comuns são: xerostomia, xeroftalmia e artrite. A doença tem prevalência de 0,3 a 5%. O objetivo deste estudo é fazer uma revisão de literatura e mencionar maneiras de aliviar os sinais e sintomas bucais de uma paciente com 56 anos portadora da (SS), atendida na clínica odontológica da Universidade Regional de Blumenau. Neste caso, a paciente relatou melhoras na qualidade de vida após as informações recebidas, sendo imprescindível que o cirurgião dentista saiba identificar possíveis portadores da doença, encaminhe para os cuidados médicos necessários e trate as condições bucais.

PALAVRAS-CHAVE: Síndrome de Sjögren, glândula salivar, xerostomia.

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