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Sjögren's Syndrome: A Rare Clinical Entity in Children

Laila Hamri[1]*, Saloua Saoudi[2], Samira Rabhi[2]

[1]Department of Internal Medicine, Provincial Hospital of Sidi Hsain Ben Naser, 45000, Ouarzazate-Maroc, Morocco

[2]Department of Internal Medicine, CHU HASSAN II, Route Sidi Harazem, BP:1835 Atlas, Fes, 30050, Morocco

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***Corresponding author:**
Laila Hamri

E-mail address:
laila.medic@gmail.com

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A B S T R A C T

Background. Sjögren's syndrome (SS) is a rare autoimmune disease in children, with only a few hundred reported cases. Its clinical presentation is atypical. We report the case of a 14-year-old boy diagnosed with recurrent parotitis. **Case Presentation.** Our patient, a 14-year-old male, presented with a one-year history of recurrent bilateral parotid swellings. Clinical examination revealed an objective oculo-buccal dryness. Ultrasound imaging showed hypoechoic hypertrophy of the parotid glands. Anti-SSA/SSB antibodies were strongly positive. Histological study of the accessory salivary glands revealed lymphocytic sialadenitis with a focus score of 3. The diagnosis of SS was confirmed according to the ACR/EULAR 2016 criteria. The combination of treatment with hydroxychloroquine and corticosteroids resulted in the resolution of clinical signs and biological inflammatory markers. **Conclusion.** Given the rarity of SS in children, several diagnostic and therapeutic difficulties arise, in the absence of classification criteria adapted to the juvenile form of the disease, and the absence of therapeutic recommendations consolidated by clinical trials in children.

1. Introduction

Juvenile Sjogren's syndrome (SS) is a rare autoimmune disorder characterized by the presence of specific autoantibodies and lymphoplasmacytic infiltration of the exocrine glands, resulting in their destruction. It is one of the most common connective tissue diseases in adults after rheumatoid arthritis. The clinical manifestations are diverse in children. Given the rarity of the juvenile form of SS, there are no specific classification criteria for this age group, nor are there any validated therapeutic recommendations for children.

2. Case Presentation

We report the case of a 14-year-old adolescent, without any notable medical history. He presented with one-year recurrent episodes of bilateral swelling of the parotid cavity with a sensation of dryness in the mouth. The clinical examination showed bilateral parotid hypertrophy which was more pronounced on the left side (Figure 1), poor oral condition with the presence of numerous dental caries, a reduced salivary flow, without any other anomalies. The ophthalmological examination was in favor of an ocular dry syndrome, with a Schirmer's test of less than 5 mm after 5 minutes. An infectious workup was initiated and returned negative. Ultrasonography of the main salivary glands was performed, showing an enlarged and hypoechoicparotid glands, without cystic or nodular lesions or calcifications within them. The immunological workup was strongly positive for anti-SSA/SSB antibodies. The sedimentation rate was 90

mm at the first hour, protein electrophoresis showed polyclonal hypergammaglobulinemia at 18 g/L, CRP level was 20 mg/L, blood count was normal, and HIV and hepatitis C serologies were negative. IgG4 assay was normal. A biopsy of the accessory salivary glands was performed, showing lymphocytic sialadenitis with a focus score of 3. The patient was treated with hydroxychloroquine, with no clear improvement of the parotidomegaly. The addition of oral corticosteroid therapy at a dose of 0.5 mg/kg/day resulted in a clear reduction of the parotid swelling and an improvement of the biological markers of inflammation. Dental caries was significant, requiring, in addition to dental care, several avulsions. After a one-year follow-up, the patient did not present with any further relapse of his disease.

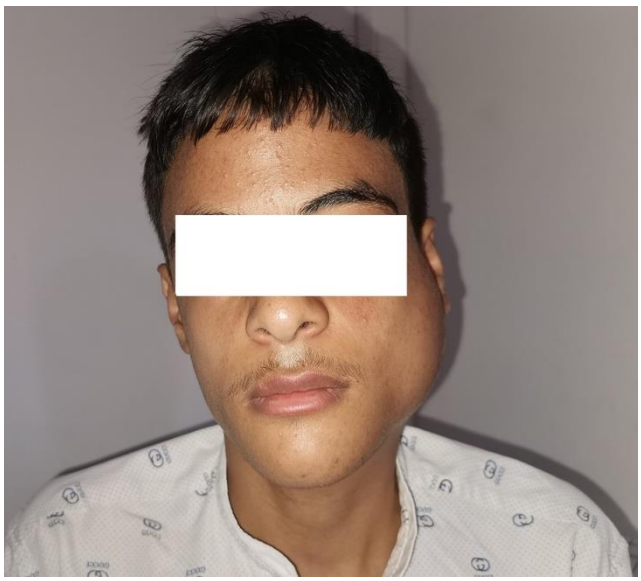

Figure 1. Bilateral parotidomegaly, more pronounced on the left, in the setting of primary Sjogren's syndrome in children

3. Discussion

SS is rare in children and adolescents, with only 254 reported cases in the literature.[1] The median age at diagnosis is 10 years.[2] As in adults, there is a female predominance.[3,4]

The clinical manifestations are characterized by their heterogeneity and atypicality. Parotitis, as seen in our patient, is found in more than half of the patients1 and seems to be the most common clinical sign in children.[5] Oculo-buccal dry syndrome is the second most common clinical sign, present in one-third of cases.[1] Dental caries, periodontitis, dysphagia and dysgeusia may also be present in juvenile SS.[6,7] General symptoms, such as fever and asthenia, are commonly found in this disease. Other extraglandular signs include lymphadenopathies, musculoskeletal manifestations (myalgias, arthralgias, arthritis), neurological complications (cerebral vasculitis, encephalitis, aseptic meningitis, polyradiculoneuritis, peripheral neuropathy), other skin and renal signs are rarely reported.[1] Lymphoproliferative complications are rare in children.[2]

Recurrent parotitis, mainly at a young age, poses the problem of differential diagnosis, especially with infectious causes (HIV, mumps, cytomegalovirus, coxsackie, tuberculosis, histoplasmosis, actinomycosis) and other systemic diseases (sarcoidosis, amyloidosis).[8]

The immunological workup is an important diagnostic tool; anti-SSA/SSB antibodies are highly sensitive but not very specific. Anti-Ro/SSA antibodies are present in 50 to 70% of cases, and anti-La/SSB in 25 to 40% of cases. They are correlated with younger age at diagnosis, longer duration of disease, and more

severe exocrine gland dysfunction with recurrent parotitis.[9]

Antinuclear antibodies can also be positive in juvenile SS but are not very specific and can also be detected in other connective tissue diseases, including systemic lupus erythematosus.

Other commonly reported laboratory abnormalities are positive rheumatoid factor, elevated sedimentation rate, and polyclonal hypergammaglobulinemia.[6]

In our patient, the diagnosis of SS was made according to the ACR/ EULAR 2016 (American College of Rheumatology/European League Against Rheumatism) criteria (Table 1).[10] Nevertheless, these criteria may lack sensitivity due to the atypical clinical presentation in children, in whom dry syndrome is not reported primarily in terms of frequency, but rather recurrent parotid swelling and general symptoms.

Table 1. ACR/EULAR 2016 classification criteria for primary Sjögren syndrome. The diagnosis is made if the total point score is ≥4, in the absence of exclusion criteria.

Items	**Weight**
Lymphocytic sialadenitis with focus score ≥ 1 on accessory salivary gland biopsy	3 points
Anti-SSA/Ro positive antibody	3 points
Ocular Staining Score ≥ 5 (or van Bijsterveld score ≥ 4) for at least one eye	1 point
Schirmer's test ≤ 5 mm/ 5 min for at least one eye	1 point
Salivary flow without stimulation ≤ 0.1 mL / min	1 point
Exclusion Criteria: -History of cervical irradiation -HCV Infection -HIV infection -Sarcoidosis -Amyloidosis -Graft versus host reaction -IgG4 associated disease	

There are no clinically validated treatment recommendations for juvenile SS. Instead, the choice of prescriptions is based on expert opinion and results obtained in adults. This is due to the rarity of this disease in children. Among the proposed treatments, nonsteroidal anti-inflammatory drugs are indicated in articular involvement. Corticosteroids are frequently prescribed in more than half of the cases with a wide range of indications. Hydroxychloroquine improves the general condition of patients, joint involvement and parotitis. Methotrexate is preferentially used in cases of overlap with juvenile idiopathic arthritis. Immunosuppressive therapy (azathioprine, mycophenolate mofetil, cyclophosphamide, ciclosporin A) is indicated in severe forms, particularly neurological, renal, and refractory cytopenias. The use of intravenous immunoglobulins has been reported in a few cases of myositis, pericarditis, and neurological damage.[11] Several biologic therapies have also been considered, with rituximab being the only biologic therapy that has shown some efficacy in dry mouth syndrome.[12] Local care of xerophthalmia with artificial tears, dental care, and stimulation of salivary secretion with parasympathomimetic agents such as pilocarpine, help prevent local complications.[12]

Regular monitoring allows for the detection of long-term complications, whether local (keratitis, corneal ulcers, dental caries, tooth loss) or general (appearance of other systemic diseases, or lymphomatous transformations).

5. Conclusion

GSS is a rare entity in children and adolescents, characterized by its atypical and heterogeneous clinical presentation, with a predominance of extra glandular forms. The occurrence of parotitis is frequent, but the diagnosis can be delayed when it is a first episode and is suspected only when it recurs.

Several tools are helpful in making the diagnosis, including histological studies of the accessory salivary glands, immunological assessment, and imaging. The proposed treatments primarily focus on symptomatic management. Regular monitoring is necessary to detect potential disease-related complications.

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