Refactory Sjogrens syndrome: Is parotidectomy justified?

ABSTRACT

Primary and secondary Sjogrens syndrome (SS) is the classification used, according to the American-European Consensus Group Criteria. Salivary and lacrimal gland dysfunctions are the usual hallmark of the disease, but the involvement of other exocrine glands and extraglandular manifestations of the disease do occur. In rare cases, few patients are refractory to the conventional therapy and due to the sudden increase in size of a mass and the aesthetic and psychological concerns of a “cancerous growth,” the surgical treatment modalities have to be modified.

There is a significant lack of contemporary literature on the indications for surgery in refractory SS, and the option should be given in patients with esthetic concerns, risk of malignancy, and to improve the overall quality of life.

Keywords: Parotidectomy, refractory Sjogrens syndrome, Sjogrens syndrome

INTRODUCTION

In 1933, a Swedish ophthalmologist, Dr. Henrik Sjogren, initially described a triad of symptoms that today is commonly known as Sjogren syndrome (SS). Primary and Secondary SS is the classification used, according to the American-European Consensus Group Criteria (AECG).[1]

Salivary and lacrimal gland dysfunction are the usual hallmark of the disease, but the involvement of other exocrine glands, such as the upper airway and gastrointestinal mucus-secreting glands does occur, as do extraglandular manifestations of the disease, in as many as one-third of the patients.[2]

SS affects between 0.1% and 0.6% of the Indian population. Mean age is found to be 42.7 years (range 18–60 years), and the mean duration of symptoms is 4.15 years (range 0.5–10 years) with a high female predominance much less than that seen in the Western countries of 9:1.[3]

SS has early head and neck manifestations, but because the symptoms are often nonspecific, diagnosis, and management are often delayed. Treatment mostly involves alleviation of sicca symptoms without prescribing a definitive cure. In rare cases, few patients are refractory to the conventional therapy. Due to the sudden increase in size of a refractory mass and the esthetic and psychological concerns of a “cancerous growth,” the surgical treatment modalities have to be modified.

CASE REPORT

A 36-year-old Asian-Indian woman presented to our Oral and Maxillofacial Clinic with a complaint of persistent swelling present bilaterally over the parotid region which had been present for more than 12 years along with dry eyes and dry mouth. Initially, the swelling was present only over the left side. A serology study for rheumatoid antibodies done previously was positive, and she was prescribed corticosteroid for same. She had then developed another swelling on the left side of her neck. At the time, the evaluating physician noted some cervical lymphadenopathy for which an excisional biopsy of the lymph node was then determined to be “nonspecific inflammation.”
Her symptoms of dryness of eyes and mouth persisted and swelling over the right side began to appear 5 years prior. She had consulted many physicians who were of the opinion of secondary SS and was prescribed 10 mg of methotrexate tablets once daily. A handful of biopsies had been done before presentation to us, most of which were suggestive of a benign lymphoepithelial lesion (one was suggestive of Castleman’s disease). A history of chronic salpingitis and ovarian cystectomy done 5 years before the presentation was also noted. She had no comorbidities at the time of her initial presentation.

A clinical examination revealed dry eyes, dry mouth, and large 16 cm² diffuse swelling of the left and moderate 8 cm² swelling of the right parotid region [Figure 1]. The skin over both swellings was normal in appearance and nontender and soft in consistency. She also had 3 purpuric/ecchymotic areas, of 1 cm² each, over her left upper calf region and lower back. Intraoral examination revealed a grossly carious upper left third molar which required extraction, and the saliva was thick and sticky in consistency.

Her laboratory evaluation included a complete blood count, comprehensive metabolic profile, and urinalysis which were within normal values, along with tests for salivary flow and tearing which revealed markedly lower than normal values. Antinuclear antibody and rheumatoid arthritis antibodies results were negative.

A plain and contrast MRI scan of the bilateral parotid region was taken which reported two well-defined homogeneously isointense soft-tissue density mass on T1-weighted and hyperintense on T2-weighted images, in the markedly enlarged superficial lobe extending to the deep lobe of the left parotid gland and one in the superficial lobe of the right parotid gland. The perilesional planes were well maintained, and no infiltration into surrounding structures was seen. There was also the enlargement of level 1, 2, and 3 lymph nodes which were considered only reactive. A lip biopsy was also performed and showed nonspecific inflammation of the minor salivary glands. Based on these findings, a provisional diagnosis of SS was given according to the AECG criteria even though autoantibodies were negative. The refractory nature of her condition was explained, and the option of superficial parotidectomy was suggested along with continuation of the medical management for the sicca symptoms. After obtaining informed consent, the patient underwent a superficial parotidectomy of the left parotid gland under general anesthesia [Figure 2]. The superficial lobe was excised through a lazy S approach. Postoperatively, the wound healed uneventfully, and the patient is on regular follow-up.

The histology showed chronic inflammatory cell infiltrate, especially lymphocytes, of the left parotid gland, correlated clinically as Sjogren’s syndrome.

**DISCUSSION**

The majority of centers today use the AECG or ACR for diagnosing SS. Theander et al. observed that the risk of developing lymphoma resided in those patients who met the AECG, not those who did not fulfill them. Earlier versions of the European classification criteria allowed for the possibility that a patient could fulfill the criteria without having objective evidence of autoantibodies and tissue infiltration as seen in our patient.

They also observed that a low CD4+/CD8+ T-lymphocyte ratio is a risk factor for the development of B-cell lymphoma in SS. Mechanisms underlying the development of B cell
lymphomas in SS potentially include defects in apoptosis, persistent antigenic stimulation, mutagenicity of B cells, T cell modulation, and the effects of various molecules such as B lymphocyte stimulator or type 1 interferon. Development of lymphoma is usually seen around 7.5 years (5–10 years) after initial SS diagnosis.

Another study by Finder et al. showed a significant association of hypergammaglobulinemic purpura of Waldenström with SS. The patient also had these consistent findings which usually are not sought after and have a high rate of developing hematological malignancy.

Parotid gland biopsies were done in the past to rule out SS, but because of frequent loss of sensation of preauricular skin and injury to the greater auricular nerve, have been used infrequently now. Labial minor salivary gland biopsy, having a sensitivity of 63.5%–93.7% and specificity of 89%, is considered a reasonable alternative. The primary goal is to identify local infiltrates in salivary gland tissue, which are considered signs of target specific damage in SS.

Medical management should be the first line of the treatment. When there is no reinforcing response to this line of treatment for a considerable period, such as 2–3 years, it can be termed “refractory”, and surgery may then be helpful. Most common indication for parotidectomy in refractory patients is to identify salivary gland-based malignancy. Patients with SS are 44-times more likely to develop non-Hodgkins Lymphoma. Diagnostic accuracy of fine-needle aspiration biopsy is at best 80%, and it is a significant challenge to differentiate SS infiltrate from lymphomas of parotid. In cases of diagnosed lymphoma, radiation can be effective; but in SS patients, it can exacerbate the preexisting symptoms. Hence, if a suspicious refractory mass is present in the parotid identified clinically and on imaging, it is a clear indication for a superficial parotidectomy.

Another indication is when esthetic requirement is to be met for the patient or associated with intractable pain. Most patients that are refractory have a psychological impression of a cancerous growth affecting them and can worsen the prognosis. The quality of life improvement is significant in these patients if surgery is performed.

Bone et al. suggested total parotidectomy with sparing of the facial nerve, so as to minimize the risk of remnant deep lobe tissue to avoid recurrence. These patients have complications with surgical wound site, including infections and fistulae. Postoperative xerostomia may also be a concern, but is not significant as majority of the gland is already damaged by the chronic infiltrates.

Hence, we suggest a parotidectomy in cases which are refractory to the medical line of treatment for 5 years or more. We also suggest a long-term follow-up period every 3 months for the 1st year followed by every 6 months for next 5 years and annually thereafter to assess the progress of the disease.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

REFERENCES

1. Vitali C, Bombardieri S, Jonsson R, Moutsopoulos HM, Alexander EL, Carson SE, et al. Classification criteria for Sjögren’s syndrome: A revised version of the European criteria proposed by the American-European Consensus Group. Ann Rheum Dis 2002;61:554-8.
2. Talal N. What is Sjögren’s syndrome and why is it important? J Rheumatol Suppl 2000;61:1-3.
3. Misra R, Hissaria P, Tandon V, Aggarwal A, Krishnani N, Dabadghao S. Primary Sjogren’s syndrome: Rarity in India. J Assoc Physicians India 2003;51:859-62.
4. Theander E, Manthorpe R, Jacobsson LT. Mortality and causes of death in primary Sjögren’s syndrome: A prospective cohort study. Arthritis Rheum 2004;50:1262-9.
5. Finder KA, McCollough ML, Dixon SL, Majka AJ, Jaremko W. Hypergammaglobulinemic purpura of Waldenström. J Am Acad Dermatol 1990;23(4 Pt 1):669-76.
6. Bone RC, Fox RJ, Howell FV, Fantozzi R. Sjogren’s syndrome: A persistent clinical problem. Laryngoscope 1985;95:295-9.