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PRIMARY SJOGREN'S SYNDROME - A CASE REPORT

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ABSTRACT

Sjogren's syndrome is a slowly progressive chronic inflammatory autoimmune disease, more commonly affecting females. It is characterized by lymphocytic infiltration of exocrine glands in 40%-60% patients. It may occur alone (Primary Sjogren's) or in association with other autoimmune diseases such as Rheumatoid arthritis (RA), Scleroderma and SLE (Secondary Sjogren's). The prevalence of Primary Sjogren's syndrome (PSS) is 0.5-1% in the general population. [1, 2] Most of the PSS patients present with the signs of Keratoconjunctivitis sicca and xerostomia and in 40% of patients, extra glandular manifestations. We present a male patient aged 44 years with the manifestation of PSS, who also showed an extra glandular site involvement.

Keywords: - Sjogren's syndrome, Autoimmune disease, Auto antibodies, Primary biliary cirrhosis

INTRODUCTION

Primary Sjogren's Syndrome is a chronic inflammatory, autoimmune disease characterized by dryness of mouth and eyes, exocrine dysfunction and lymphocytic infiltration of exocrine glands. The clinical presentation may vary. It can affect men and children though frequently seen in women of 40-60 years. Xerophthalmia and Xerostomia are the main clinical presentation commonly called Sicca syndrome. This is the most common autoimmune disease next to Rheumatoid arthritis primarily affecting peri and post menopausal female in the ratio of 9:1. [3]

It is classified into Primary and Secondary.

Primary Sjogren's manifests as dryness of eyes (Kerato conjunctivitis sicca) and salivary gland dysfunction (Xerostomia). Secondary includes involvement of one or both exocrine tissues associated with other connective tissue disorders like SLE, RA, Scleroderma etc. The etiology of Sjogren's is elusive and the diagnosis is based on several clinical and laboratory findings. Various criteria are being used world wide for the diagnosis of Sjogren's syndrome such as Copenhagen criteria, California criteria, Green criteria and Japanese criteria. The most accepted is the European criteria proposed by the American European consensus group in 2002, adopted by Vitali et al at the University of Minnesota. [4]

I) Ocular Symptoms (1:3)

- Dry eyes daily > 3 months
- Sand or gravel sensitivity in the eyes
- Use of tear substitutes (> three times a day)

II) Oral Symptoms (1:3)

- Dry mouth daily > 3 months

- Recurrent or persistent swollen salivary glands
- Frequent sipping of water to aid in swallowing dry foods

III) Ocular Signs (1:2)

- Positive Schirmer's test (<5mm/5min)
- Rose Bengal score (>4 von Bijesterfeld score)

IV) Salivary Function

- Whole unstimulated saliva <1.5ml/15min (0.1ml/min)
- Positive scintigraphy
- Positive sialography

V) Labial Salivary Gland Biopsy

- Presence of focal lymphocytic sialadenitis in minor salivary glands, with a focus score > 1, defined as number of lymphocytic foci which are adjacent to normal-appearing mucous acini and contain more than 50 lymphocytes per 4 mm^2.

VI) Serum Auto antibodies

- Anti-SS (Soluble Substance)-Ro
- Anti-SS (Soluble Substance)-La
- Rhesus Factor
- Antinuclear Antibodies

We present the case of Primary Sjogren's Syndrome in a Male patient with an extra glandular site involvement.

Case Report

A 44 year male, a daily labourer with no significant past history came to MIMS Hospital, Nellimarla, Vizianagaram district ,with the complaints of difficulty in swallowing solid food and severe itching of eyes with gritty sensation. He was in good health status and revealed that he has been suffering from severe dryness of mouth and redness and burning of eyes for the past three months. There was high incidence of dental caries in the past six months. The patient was thoroughly examined and investigated.

On examination, the eyes were dry. Tongue too appeared dry and atrophic. Three caries teeth were present. There was slight enlargement of parotid gland on the right side on examination.

Fine needle aspiration cytology was done for the right parotid gland. It revealed the presence of large and small lymphocytes dispersed as single cells with small cells predominating.

Biopsy of minor salivary gland on the inner side of lower lip was done and examined histologically which revealed focal aggregates of lymphocytes and few plasma cells and macrophages invading the numerous salivary gland acini and ducts in the deeper stroma. More than one focal aggregate is seen per 4 mm^2. This is highly diagnostic of Sjogren's syndrome. [5, 6] Predominantly $CD4^+$ cells are present.

Based on the investigations and biopsy, the case was reported to be Primary Sjogren's Syndrome with hepatic changes, that are concurrent with mild Primary Biliary Cirrhosis.

DISCUSSION

The diagnosis of Sjogren's in the present case was based on ocular symptoms of inadequate tear production, positive Schirmer's test and Rose Bengal stain, immunological tests and salivary gland biopsy. The patient's disease was in confirmation with the diagnostic criteria of PSS according to American European Classification. According to data from literature, antibodies against SSA /Ro are found in approximately 75% of patients with Primary Sjogren's Syndrome. They are also seen in SLE and Healthy individuals. Antibodies against SSB/La are present in 40-50% of patients with Primary Sjogren's Syndrome. SSA/Ro and SSB/La antibodies usually occur together. These were positive in the present case.

Elevated levels of serum Alkaline Phosphatase could be due to primary biliary cirrhosis (PBC), which is the commonest hepatic manifestation in Sjogren's syndrome. The raised levels of serum transaminases and rising titres of ANA may be accounted for an autoimmune hepatitis (AIH) associated with PSS.[7] Thus in the present case there is coexistence of both PBC and AIH. Mild

increase in Transaminase levels has been observed in 22% of patients with Sjogren's syndrome.[8] Elevated Transaminases often determine whether either liver biopsy or anti mitochondrial antibodies are to be determined.[9] However these antibodies are negative in the present case. Sub clinical pancreatic involvement is a common finding as illustrated by hyperamylasemia in few patients of PSS. This could be due to salivary gland inflammation also.[10] Our present case showed elevated serum amylase levels. Leucopenia could be due to accelerated atherosclerosis which is common in Primary Sjogren's Syndrome similar to patients having Hypertension and Diabetes mellitus. Leucopenia may be explained as due to ongoing intravascular coagulopathy that causes WBC binding and rolling along endothelial surface. [11] Recently it was reported that an autoantibody to α-fodrin, a major component of the membrane cytoskeleton is specifically detected in the serum of Primary and Secondary Sjogren's syndrome patients but not in other auto immune diseases. [12] However it was not investigated for in the present case.

The patient was advised Pilocarpine 5 mg. 4 times/day and hydroxy methyl cellulose eye drops and low dose methyl prednisolone. He was asked to visit for regular follow up.

CONCLUSION

This case highlights the importance of cautious screening for PSS because general symptoms like dry eyes and dry mouth may not clinch the diagnosis at an early stage. Early symptomatic and systemic treatment may render a better quality of life. Our patient is presently working as daily laborer and is regularly visiting the hospital for follow up.

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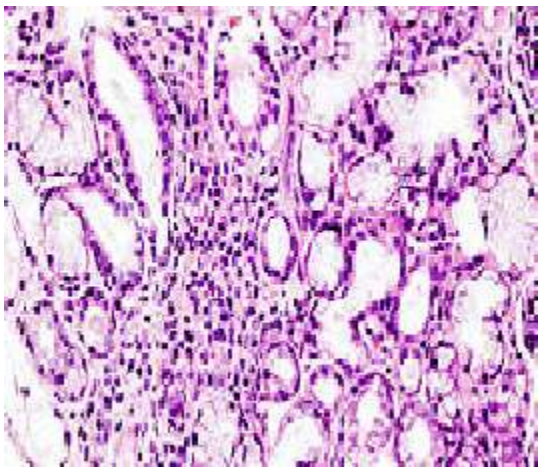
Investigations

Parameters	**Result**	**Reference values**
Schirmer's test	5 mm. right eye in 5 min. 3mm. left eye in 5 min.	10-15 mm. paper should be moistened.
Fundus of eye	Optic disc coloboma in right eye	----
Rose Bengal stain	Positive	Negative
Tear film break up time	< 6 sec	>10 sec
Hemoglobin	14.7gm/dl	12-18gm/dl
RBC	3.45 millions/cu.mm	3.5-4.5 million/cu.mm
WBC	3800/cu mm	4000-11000/cu.mm
Platelet count	3.1 lakhs/cu mm	2-4 lakhs/ cu mm
ESR	58mm at the end of first hour	5-12 mm at end of first hour
Serum Creatinine	1.0 mg/dl	0.6-1.4mg/dl
Serum Total Proteins	7.8gm/dl	6-8g/dl
Serum Albumin	3.6gm/dl	3.5-5.5g/dl
A:G ratio	0.8:1	1.5:1
Serum Total Bilirubin	1.4mg/dl	0.4-1.2mg/dl
Serum Direct Bilirubin	0.5mg/dl	0.2-0.4mg/dl
Serum ALT	65U/L	0 –40 U/L
Serum AST	68U/L	0-40 U/L
Serum Alkaline Phosphatase	160U/L	30-115 U/L
Serum Amylase	129U/L	35-140 U/L

Immunological investigations

Parameters	Method	Result	Reference values
C Reactive Protein	ELISA	18mg/L	Up to 6mg/L
ANA(homogenous)	ELISA	++++	Negative
Anti Ro(SS-A)Ab Ig G	EIA	110 U/ml	<10 U/ml
Anti La (SS-B) Ab Ig G	EIA	108 U/ml	<10 U/ml
Rheumatoid Factor	IMMUNOTURBIDIMETRY	Negative	Negative
Anti-mitochondrial antibody	ELISA	Negative	Negative
Complement **C3**	NEPHELOMETRY	1.29	0.9-1.8
Complement **C4**	NEPHELOMETRY	0.23	0.10-0.40



Minor salivary gland biopsy from inner side of lower lip showing focal lymphoid infiltration