Sarcoidosis clinically presenting as Primary Sjogren's syndrome: Case Report

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ABSTRACT: Sarcoidosis can present like primary Sjogren's syndrome. We report a case of 42-year-old female presented with colicky pain in abdomen due to stone in left upper ureter, low grade fever and weight loss, followed by swelling of both parotid and lacrimal glands along with dry eyes and dry mouth. A diagnosis of Sarcoidosis was made on subsequent histopathological and blood investigation.

Key words: Granuloma; Lymphadenopathy; Sarcoidosis, Sjogren's syndrome

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INTRODUCTION: Bilateral salivary and lacrimal gland enlargement and symptoms of dry eyes and dry mouth may occur in Sarcoid mimicking the presentation of primary Sjogren's syndrome (SS)[1,2] and necessitating diagnosis on histology. Lymphadenopathy is very common in Sarcoidosis, these nodes are painless, non adherent, with firm, rubbery texture. The definitive diagnosis of Sarcoidosis is based on biopsy in context of history, physical examination, blood test, x ray, lung function, and if available, gallium-67 chest scan and brochoalveolar lavage[3]. We report a patient with clinical features consistent with Sjogren's syndrome (SS) who was subsequently diagnosed as having Sarcoidosis.

CASE REPORT: A 42 year old Indian woman, residing at Vadodara Gujarat, was referred by her private practitioner to Sterling Hospital for suspicion of Sjogren's syndrome. She had a one and half month history of colicky pain in the abdomen and vague symptoms of low grade fever with loss of weight. After 15 days she noticed swelling of both Parotid and lacrimal glands, difficulty in swallowing due to dry mouth, dry eyes, and bilateral supraclavicular region swelling. There was no other relevant personal, past, or family history. The striking finding on examination

was woody enlargement of both parotid and lacrimal glands and lymph nodes in both cervical, supraclavicular and axillary regions. General examination otherwise was unremarkable.

Investigations showed that her hemoglobin was 10.2 gm% (normocytic and normochromic), erythrocyte sedimentation rate 96 mm at the end of 1^{st} hr. (Westergren), other hematological indices, microscopy of urine, and routine biochemistry were normal except for raised alkaline phosphatase -124 U/L (normal range 42-98 U/L).

Ophthalmologist assessment, barium swallow and Mantoux test were normal.

Antibodies to SS-A, SS-B, Sm, and nRNP were not detected, anti-double-stranded DNA was borderline positive and not likely to be significant on immunoblot. A radiograph of chest was showing bilateral hilar lymphadenopathy and both lungs showed prominent broncho-vascular markings.

Fine needle aspiration cytology from both parotid glands was performed, which showed only small lymphoid cells & fibrotic fragments. Granuloma and atypical cells were not found.

Ultrasonography of the abdomen showed a 9 mm size calculus in left upper ureter with mild hydronephrosis. Few nodes were noted in portahepatis, largest being 28x18mm. Nodes were also seen in right axilla, bilateral supraclavicular and cervical regions. Both parotid glands appeared enlarged in size and showed multiple hypo-echoic areas within, suggesting parototitis. No stone or calcifications were seen.

CT scan of whole body showed bilateral bulky lacrimal glands and parotid glands. Multiple nodes were noted in cervical, bilateral supraclavicular, axillary, pre-paratracheal, both hilar, subcarinal, porta, mesenteric, cardiophrenic angle, abdominal, retroperitoneal and in iliac fossa nodes were of variable sizes. Few fissural nodes were also noted. Bilateral small nodular pulmonary opacities and few large nodules in both lower lobes were also seen. The CT abdomen showed calculus in left ureter with mild hydronephrosis. Mild hepatomegaly and bulky spleen noted without any mass lesion.

Overall finding was suggestive of granulomatous lesion - Sarcoidosis and/or

Koch's more likely than lymphoma was the radiologist's opinion.

Clinically the differential diagnosis lay between `Sarcoidosis with SS` and `lymphoma associated SS`.

Figure 1: CT scan showing bilateral lacrimal glands enlargement

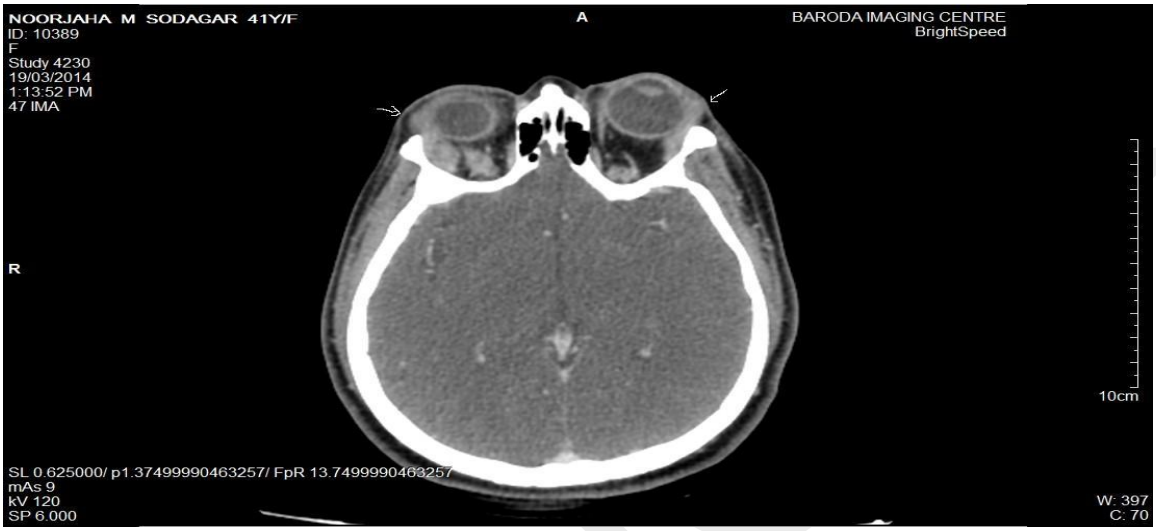
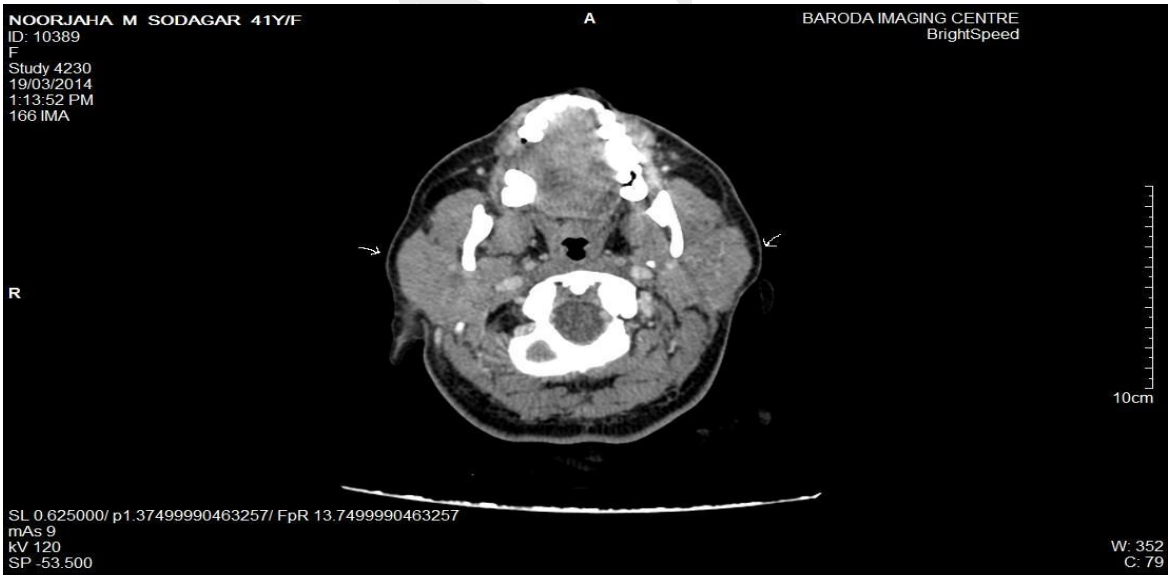


Figure 2: CT scan showing bilateral parotid glands enlargement

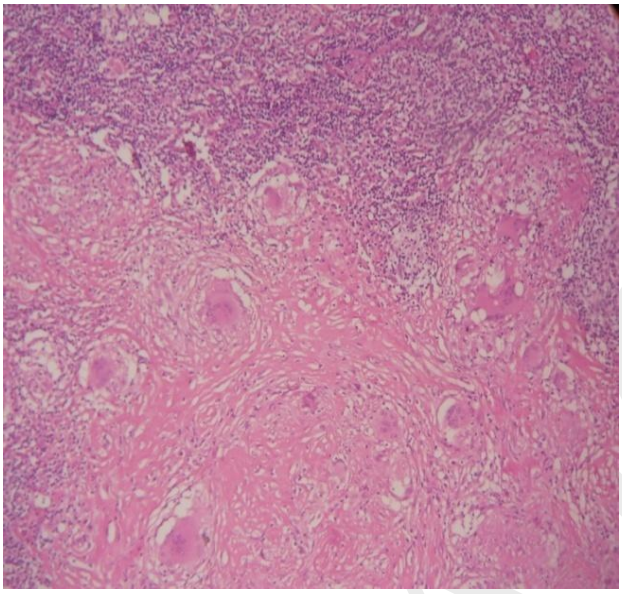


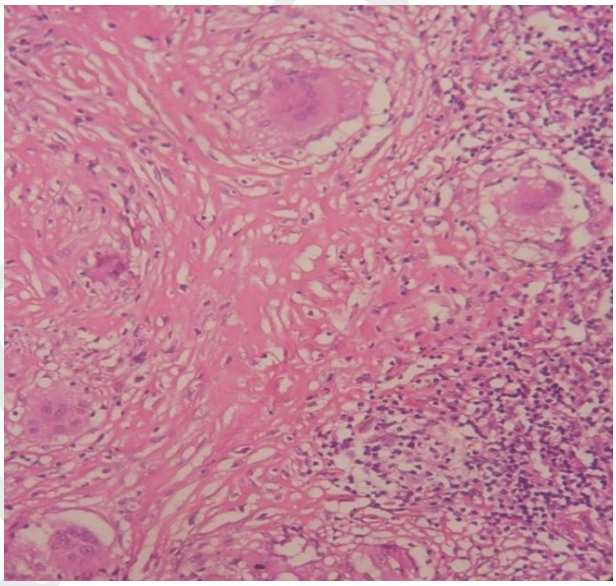
Hence supraclavicular lymph nodes excision biopsy was done. On histology the normal architecture of the lymph nodes had been replaced by sharply defined compact non-

caseating granulomas with plenty of multinucleated giant cells (MNGCs) with no evidence of caseous necrosis. Stains for fungus and acid fast bacilli were negative.

Angiotensin converting enzyme was raised 79.1 units/ml. Normal range (18-52 units/ml).

Figure 3&4: Cervical lymphnode biopsy showing multiple non-caseating granuloma (H&E stain 20X & 40X view)





On follow-up, patient generally felt better with reduction in size of cervical lymphadenopathy, parotid and lacrimal glands swelling with Tablet prednisolone.

DISCUSSION: This case presented a diagnostic dilemma in the beginning in which this patient presented with colicky pain in abdomen, vague symptoms of low grade fever and weight loss. Initially only USG of abdomen was done, which showed stone in left upper ureter, for which she was on treatment for renal calculus, but 15 days later she developed painless enlargement of both the parotid and lacrimal glands with dry eyes, dry mouth along with cervical and axillary lymphadenopathy.

Though the bilateral parotid and lacrimal gland enlargement along with dry mouth and dry eyes suggest SS, but the subsequent investigations- ACE and the lymphnode biopsy showing non-caseating granulomas clinched the diagnosis of Sarcoidosis.

Sarcoidosis is a multisystem granulomatous disorder characterized

pathologically by the presence of non-caseating granuloma in involved organs. This disease affects the patients between 10 and 40 years of age. It typically presents with bilateral hilar adenopathy, pulmonary reticular opacities, skin, joint and eye involvement. Lung is the most common organ involved, which is 95% followed by skin and lymph nodes, 15.9% and 15.2% respectively[4, 5]

Sarcoidosis can involve all organ systems, of which the most prominent sites of extrapulmonary disease include the skin, eyes, reticuloendothelial system, musculoskeletal system, exocrine glands, heart, kidney, and central nervous system. Extra pulmonary manifestations vary on the basis of sex, age at presentation, and ethnicity. Women are more likely to have neurologic or ocular involvement, while men more frequently have abnormalities of calcium homeostasis. Up to 30 percent of patients present with extra pulmonary disease[4].

The stage of pulmonary involvement is based on the chest radiograph. Type I is defined by the presence of bilateral hilar adenopathy with no parenchymal abnormalities, type II consists of bilateral hilar adenopathy with diffuse paranchymal changes (parenchymal involvement or reticular opacities), type III consists of diffuse paranchymal changes without bilateral hilar adenopathy and type IV consists of parenchymal involvement turns into volume loss (pulmonary fibrosis) and there may be other features (cavitations, calcifications, hilar retraction, bullae, cysts, and emphysema).

Radiograph of chest in our case was showing bilateral hilar lymphadenopathy and prominent broncho- vascular markings on both sides consistent with type II pattern.

This patient had bilateral parotid swelling and fever, however there was no uveitis or facial palsy to suggest Heerfordt's syndrome. Painless swelling of the salivary glands occurs in approximately <10 percent of patients with Sarcoidosis. Xerostomia and keratoconjunctivitis sicca may also be seen, producing manifestations similar to those seen in Sjogren's syndrome. This patient complained of dry eyes however ophthalmologist assessment showed no evidence of keratoconjunctivitis sicca or anterior and posterior uveitis.

Reticuloendothelial system disease is common in Sarcoidosis. It manifests as peripheral lymphadenopathy in about 20 to 30 percent of the patients.

Hepatomegaly, biochemical evidence of liver involvement and/or non-caseating granuloma on liver biopsy is seen in 60 to 90 percent of the patients whereas enlargement of the spleen is seen in about 5 to 10 percent.

Sarcoid granuloma most commonly involves the periportal area. Mild hepatomegaly with elevated serum alkaline phosphatase seen in this patient might be suggestive of granulomatous infiltration in the liver.

A calcium metabolism abnormality is found in 1 to 2 present of all patients. The defect in calcium metabolism is due to enhanced calcium absorption in gut, which is related to an abnormally high level of circulating 1,25-dihydroxyvitamin D produced by macrophages in the granuloma. Patients may present with hypercalciuria with or without hypercalcemia, and nephrocalcinosis[3].

The calcium level and electrolytes were normal in this patient however urinary calcium was not sent. This patient had stone in left upper ureter with mild hydronephrosis on same side suggestive of an impaired calcium metabolism.

The erythrocyte sedimentation rate (ESR) is frequently elevated and a positive rheumatoid factor can exist. ACE level is elevated in 75 percent of untreated patients with Sarcoidosis[6].

The characteristic morphologic feature of Sarcoidosis is the non-caseating granuloma of the lung, which is most commonly found in the alveolar septa, the walls of bronchi, and small blood vessels. Granuloma formation is probably preceded by an alveolitis. It involves the interstitium more than the alveolar spaces and is characterized by the accumulation of inflammatory cells, including monocytes, macrophages and lymphocytes[7].

Both sarcoid and SS may share aetiological factors[8] and result from defective T suppressor cell regulation[9].

The diagnosis of Sarcoidosis requires compatible clinical, radiographic and histopathological manifestations and exclusion of other diseases that may present similarly.

CONCLUSION: At the end we can conclude that this patient who was referred to us for suspected Sjogren's syndrome clinically, finally turned out be a case of sarcoidosis based on radiologic, biochemical, histopathological features and his excellent response to corticosteroids. The negative PPD test, the the non-caseating granuloma & negative ZN stain on biopsy and his excellent response to corticosteroids also ruled out possibility of tuberculosis.

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