SJOGREN’S SUBTYPES

Primary Sjogren Disease VS Sjogren's Syndrome
© Elaine Moore

This article describes the clinical and diagnostic differences between primary and secondary Sjogren's syndrome.

Sjogren's disease is a chronic autoimmune disease that occurs as a localized syndrome primarily causing mouth and eye dryness (sicca syndrome) or as a systemic disease affecting multiple organs. Frequently, the condition remains unrecognized and untreated, and when treated, the average diagnosis is reported to take 3.5 years.

Who is Affected?

Sjogren's is suspected of affecting about 2-3 million Americans, 90 percent of them women. Women in their fourth decade of life are most likely to be affected.

Other autoimmune disorders in which Sjogren's occurs include: systemic lupus erythematosus, scleroderma, mixed connective tissue disease, relapsing polychondritis, and polymyositis. Patients with Graves' disease treated with radioiodine may experience damage to salivary or parotid glands causing symptoms similar to those of xerostomia. Patients with primary Sjogren's are at risk for later developing other autoimmune conditions, including Hashimoto's thyroiditis, and certain malignancies such as pseudo-lymphoma, a proliferation of lymphocytic white blood cells that occurs in about 10 percent of patients with primary lymphoma. Up to 10 percent of these patients with pseudo-lymphoma or 1 percent of patients with primary Sjogren's may develop non-Hodgkin's lymphoma.

Symptoms

The complaint most often listed at the time of diagnosis is mouth dryness. In Sjogren's syndrome, white blood cells known as lymphocytes invade the exocrine glands. The exocrine glands produce needed moisture for lubricating and bathing the body's organs. Sjogren's syndrome occurs as a primary or secondary disorder.

As a primary disorder, a patient with no known connective tissue disease or arthritic symptoms develops dryness of the mouth, which is called xerostomia, or dryness of the eyes, which is called xerophthalmia. Eye dryness caused ocular discomfort, and the eye may adhere to the eyelid causing conjunctival or corneal surface injuries and keratitis. Eye symptoms are related both to eye gland destruction and a diminished response to nerve impulses.
Other organs, including the digestive organs and vagina, may also be affected. In secondary Sjogren's syndrome, patients with another autoimmune disorder such as rheumatoid arthritis, develop mouth and eye dryness. Up to 25 percent of patients with rheumatoid arthritis later develop secondary Sjogren's syndrome.

**Extraglandular Symptoms**

While most patients with Sjogren's syndrome have symptoms limited to sicca syndrome, a subset of patients may develop extraglandular symptoms, that is, symptoms not related to the glands. These symptoms include fatigue, rash, cutaneous vasculitis, Raynaud's phenomenon, arthralgia (joint pain), myalgia (muscle pain), myositis (muscle inflammation), frank arthritis, and a particular form of erosive or aggressive osteoarthritis affecting the hands and feet. Internal organ involvement includes: lung inflammation (pneumonitis), liver disease, nervous system inflammation (neuropathy), kidney disease (glomerulonephritis), bruising related to elevated immunoglobulins; leukopenia (decreased white blood cell count); thrombocytopenia (decreased platelet count); and anemia. There is also an association with head and neck lymphoma. Gynecological complaints include vaginal dryness, diminished urine, and dyspareunia (painful intercourse).

**Differential Diagnosis**

Sjogren's syndrome must also be differentiated from drug-related xerostomia, which can be caused by up to 400 different medications. Drugs known to cause sicca syndrome include benzodiazepines, tricyclic antidepressants, and antihistamines. External beam radiation and radiodine treatment, especially in the higher doses, used for cancer, may permanently damage the salivary and lacrimal glands. Mouth breathing due to nasal obstruction may also cause similar symptoms.

Patients with acidosis, hepatitis, fibromyalgia, chronic or sclerosing sialadenitis (inflammation of salivary glands) and patients with human immunodeficiency virus infection with salivary diffuse infiltrative lymphocytosis syndrome (DILS) also have symptoms and some laboratory test results similar to patients with Sjogren's syndrome. These patients who have diseases with symptoms mimicking those of Sjogren's syndrome will not have positive SS-A or SS-B antibody tests.

**Diagnostic Criteria**

Four criteria are used to diagnose Sjogren's syndrome: objective documentation of dry mouth or dry eye, positive salivary gland lip biopsy results, an elevated ANA titer, primarily due to a positive SS-A antibody test. Overall, 70-90 percent of patient's with Sjogren's have a positive ANA test, and 40-60 percent have SS-A or Ro antibodies. SSA-B or La antibodies are seen in 20-40 percent of patients, and rheumatoid factor (RF) is seen in 60-90 percent of patients.
In general, men with Sjogren's are less likely to have elevated autoantibody titers. The C-reactive protein (CRP) and the erythrocyte sedimentation rate (ESR) test results are usually elevated. Blood immunoglobulin levels are also usually elevated (hypergammaglobulinemia) in Sjogren's. MRI or ultrasound examinations of the parotid gland are also used to evaluate glandular insufficiency. Sialometry is used either with or without stimulation to evaluate deficiencies in saliva production. Both parotid and submandibular flow may be measured. The Schirmer test is often used to measure the volume of tear production.

**Primary VS Secondary Sjogren’s**

Patients with primary Sjogren's disease are more likely to have both SS-A (Ro) and SS-B (La) antibodies or SS-A antibodies alone. Patients with secondary Sjogren’s are less likely to have these antibodies. In Sjogren's test for SS-A measuring both 52 and 60 kD are positive, whereas procedures that measure 60 kD or 52 kD antibodies alone are negative.