

SJOGREN SYNDROME

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Definition & Epidemiology

- Sjögren's syndrome is a **chronic**, slowly progressive **autoimmune disease** characterized by **lymphocytic infiltration** of the exocrine glands resulting in xerostomia and dry eyes.
- **Middle-aged women** (female-to-male ratio, **10:1**) are primarily affected, although it may occur in **all ages**, including childhood. Peak onset 5th & sixth decades
- The prevalence of primary Sjögren's syndrome is approximately **0.5–1%**
- while **30%** of patients with autoimmune rheumatic diseases suffer from secondary Sjögren's syndrome

Definition

The term **secondary** refers to the presence of

- keratoconjunctivitis sicca or xerostomia in association with another rheumatologic disease, such as :
 - rheumatoid arthritis
 - systemic lupus erythematosus ,
 - systemic sclerosis

Association of Sjögren's Syndrome with Other Autoimmune Diseases

- Rheumatoid arthritis
- Systemic lupus erythematosus
- Scleroderma
- Mixed connective tissue disease
- Primary biliary cirrhosis
- Vasculitis , multiple sclerosis
- Chronic active hepatitis

Pathogenesis

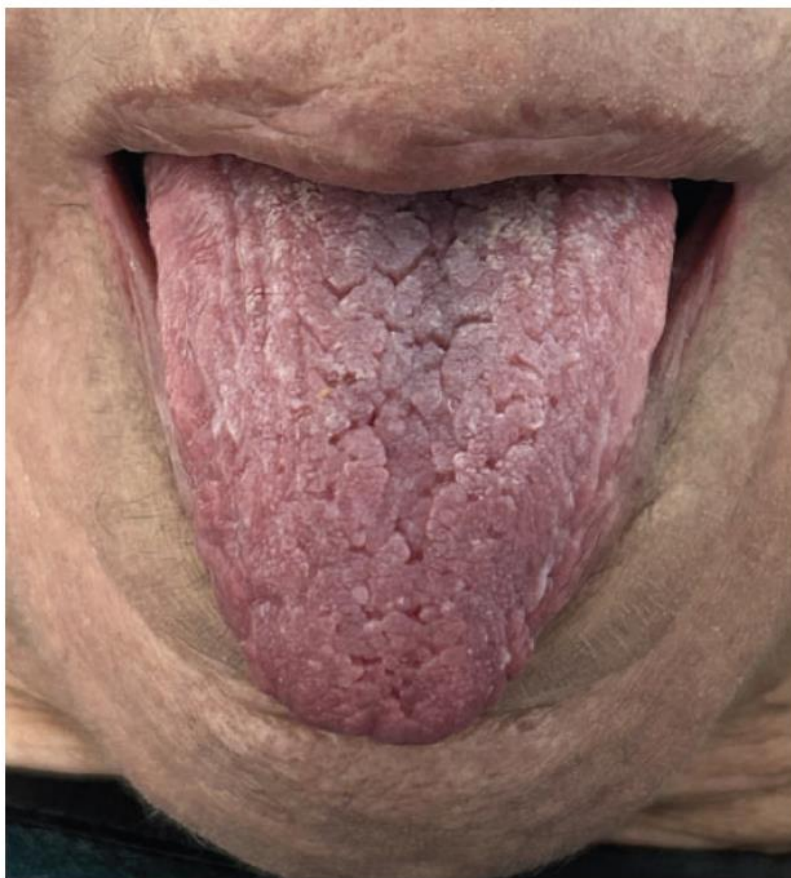
- Sjögren's syndrome is characterized by both lymphocytic infiltration of the exocrine glands and B lymphocyte hyperreactivity
- Autoantibodies to **Ro/SS-A and La/SS-B** antigens are usually detected at the time of diagnosis and are associated with:
 - earlier disease onset
 - longer disease duration
 - salivary gland enlargement
 - more severe lymphocytic infiltration of minor salivary glands

Differential diagnosis of sicca symptoms

Xerostomia	Dry Eye	Bilateral Parotid Gland Enlargement
Viral infections	Inflammation	Viral infections
Drugs	Stevens-Johnson syndrome	Mumps
Psychotherapeutic	Pemphigoid	Influenza
Parasympatholytic	Chronic conjunctivitis	Epstein-Barr virus
Antihypertensive	Chronic blepharitis	Coxsackievirus A
Psychogenic origin	Sjögren's syndrome	Cytomegalovirus
Irradiation	Toxicity	HIV, HCV
Diabetes mellitus	Burns	Sarcoidosis
Trauma	Drugs	IgG4 syndrome
Sjögren's syndrome	Neurologic conditions	Sjögren's syndrome
Amyloidosis	Impaired lacrimal gland function	Metabolic disorders
	Impaired eyelid function	Diabetes mellitus
	Miscellaneous	Hyperlipoproteinemias
	Trauma	Chronic pancreatitis
	Hypovitaminosis A	Hepatic cirrhosis
	Blink abnormality	Endocrine
	Anesthetic cornea	Acromegaly
	Lid scarring	Gonadal hypofunction
	Epithelial irregularity	

Clinical Manifestations

- The majority of Sjögren's syndrome patients have symptoms related to **diminished lacrimal and salivary gland function**.
- The initial manifestations can be mucosal or nonspecific dryness, and **8–10 years** may elapse from the initial symptoms to full-blown development of the disease
- The principal oral symptom of Sjögren's syndrome is **dryness (xerostomia)**. Patients complain of : difficulty in swallowing dry food, inability to speak continuously, a burning sensation, increase in dental caries
- Physical examination shows a dry, erythematous, sticky oral mucosa. There is atrophy of the filiform papillae on the dorsum of the tongue, and saliva from the major glands is either not expressible or cloudy



Clinical Manifestations

Dryness of the mouth - xerostomia

Deep red tongue

Dental caries common



Clinical Manifestations

- **Enlargement of the parotid** or other major salivary glands occurs in two-thirds of patients with primary Sjögren's syndrome but is uncommon in those with the secondary syndrome
- Diagnostic tests include sialometry, sialography, scintigraphy, ultrasound, MRI or MR sialography of the major salivary glands
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- **The labial minor salivary gland biopsy** permits histopathologic confirmation of the focal lymphocytic infiltrates.

Clinical Manifestations



Clinical Manifestations

- Ocular involvement
- Patients usually complain of a **sandy or gritty feeling under the eyelids**.
- Other symptoms include: burning, accumulation of thick strands at the inner canthi, decreased tearing, redness, itching, eye fatigue, and increased photosensitivity.
- These symptoms are attributed to the destruction of corneal and bulbar conjunctival epithelium, defined as **keratoconjunctivitis sicca**

Clinical Manifestations

- Involvement of other exocrine glands occurs less frequently and includes:
 - decrease in mucous gland secretions of the **upper and lower respiratory tree**, resulting in dry nose, throat, and trachea (xerotrachea),
 - diminished secretion of the exocrine glands of the **gastrointestinal tract**, leading to esophageal mucosal atrophy, atrophic gastritis, and subclinical pancreatitis.
- Extraglandular (systemic) manifestations are seen in **one-third** of patients with Sjögren's syndrome while they are very rare in patients with Sjögren's syndrome associated with rheumatoid arthritis.

Clinical Manifestations

- Easy fatigability, low-grade fever, Raynaud's phenomenon, myalgias, and arthralgias.
- Most patients with primary Sjögren's syndrome experience at least one episode of nonerosive arthritis during the course of their disease.
- Manifestations of pulmonary involvement are frequently evident histologically but rarely clinically important. Dry cough is the major manifestation that is attributed to small airway disease

Clinical Manifestations

- Renal involvement includes interstitial nephritis
- Glomerulonephritis is a rare
- Lymphoma is a well-known manifestation of Sjögren's syndrome that usually presents later in the illness.
- Persistent parotid gland enlargement, purpura, leukopenia, cryoglobulinemia, and low C4 complement levels are manifestations suggesting the development of lymphoma.

Clinical Manifestations

- the same risk factors account for **glomerulonephritis** and lymphoma and are those that confer increased mortality.
- Most lymphomas are **extranodal, low-grade marginal zone B cell lymphomas**.
- Routine laboratory tests reveal mild normochromic, normocytic anemia. An elevated erythrocyte sedimentation rate is found in approximately **70%** of patients

Treatment

- To replace deficient tears, there are several readily available **ophthalmic preparations** (Tearisol; Liquifilm; 0.5% methylcellulose; Hypo Tears)
- If corneal ulcerations are present, **eye patching** and **boric acid ointments** are recommended.
- Certain drugs that may decrease lacrimal and salivary secretion such as diuretics, antihypertensive drugs, anticholinergics, and antidepressants **should be avoided**.

Treatment

- For xerostomia the best replacement is **water**.
- To stimulate secretions, **pilocarpine** or **cevimeline** administered orally appears to improve sicca manifestations, and both are well tolerated.
- **Hydroxychloroquine** (200 mg) is helpful for arthralgias
- **Glucocorticoids** and/or immunosuppressive agents (e.g., **cyclophosphamide**) are indicated only for the treatment of systemic vasculitis.

