

## **Lecture 5**

## **immunology**

**Sjögren's syndrome** is an inflammatory disease that can affect many different parts of the body, but most often affects the tear and saliva glands. Patients with this condition may notice irritation, a gritty feeling, or painful burning in the eyes. Dry mouth (or difficulty eating dry foods) and swelling of the glands around the face and neck are also common. Some patients experience dryness in the nasal passages, throat, skin. Swallowing difficulty and symptoms of acid reflux are also common.

### **symptoms**

The symptoms of Sjogren's can be different from person to person. You may have just one or two, or you may have many. By far, the most common symptoms are:

- Dry mouth that may have a chalky feeling or feeling or feel like cotton
- Dry eyes that may burn, itch, or feel gritty
- Dry throat, lips, or skin
- Dryness in your nose
- A change in taste or smell

- Swollen glands in your neck and face

Dry cough

Feeling tired

Swelling, pain, and stiffness in your joints

## **causes**

Sjogren's syndrome is an autoimmune disorder. Your immune system mistakenly attacks your body's own cells and tissues.

Scientists aren't certain why some people develop Sjogren's syndrome. Certain genes put people at higher risk of the disorder, but it appears that a triggering mechanism — such as infection with a particular virus or strain of bacteria — is also necessary.

In Sjogren's syndrome, your immune system first targets the glands that make tears and saliva. But it can also damage other parts of your body, such as:

Joints

Thyroid

Kidneys

Liver

Lungs

Skin

Nerves

Risk factors

Sjogren's syndrome typically occurs in people with one or more known risk factors, including:

**Age:** Sjogren's syndrome is usually diagnosed in people older than 40.

**Gender:** Women are much more likely to have Sjogren's syndrome.

**Rheumatic disease:** It's common for people who have Sjogren's syndrome to also have a rheumatic disease — such as rheumatoid arthritis or lupus.

## **complications**

Most of the complications of Sjögren's syndrome occur because of decreased tears and saliva. Patients with dry eyes are at increased risk for infections around the eye and may have damage to the cornea. Dry mouth may cause an increase in dental decay, gingivitis (gum inflammation), and oral yeast infections (thrush) that may cause pain and burning. Some patients have episodes of painful swelling in the saliva glands around the face.

Complications in other parts of the body can occur. Pain and stiffness in the joints with mild swelling may occur in some patients, even in those without rheumatoid arthritis or lupus. Rashes on the arms and legs related to inflammation in small blood vessels (vasculitis) and inflammation in the lungs, liver, and kidney may

occur rarely and be difficult to diagnose. Numbness, tingling, and weakness also have been described in some patients. The parotid gland is at the edge of the jaw and can become swollen and inflamed in some people with Sjögren's Syndrome.

## **Diagnosis**

Diagnosis depends on a combination of symptoms, physical examination, blood tests, and sometimes special studies. Dry eyes and mouth may be early signs of the condition but require further investigation, because these symptoms can be caused by many other conditions or medications. Special tests may assess any decrease in tear or saliva production. An eye examination is helpful in detecting any eye changes seen in Sjögren's. Blood tests can determine the presence of antibodies (immune system proteins that help destroy foreign invaders) typical of the disease. Typical antibodies include anti-nuclear antibodies (ANA), anti-SSA and SSB antibodies or rheumatoid factor, but these are not always present. Biopsies of saliva glands around the face or under the surface of the inner lip also may be used to make a diagnosis.

## **Treatment**

Treatment is designed to lessen the most bothersome symptoms. Dry eyes usually respond to artificial tears applied regularly during the day or to gels applied at night. Other measures, such as plugging or blocking tear ducts, can be used in more severe cases. Eye drops that reduce inflammation in the glands around the eyes, such as cyclosporine (Restasis), may be used to increase tear production. Drinking water, chewing gum, or using saliva substitutes may relieve dry mouth. Some patients benefit from using prescription medications that stimulate saliva flow, such as pilocarpine (Salagen) or cevimeline (Evinoxac). If patients develop yeast infections, anti-fungal therapies may be used. Humidifiers and nasal saline irrigation may improve nasal dryness. Medications that reduce gastric acid (such as proton-pump inhibitors and H2 blockers) may lessen symptoms of acid reflux. Treatments may help relieve some of the dryness, but usually some dryness persists.