PAROTITIS

An inflammation of one or both parotid glands which can impair male fertility.

♂️ Symptom ♂️ Male

About Parotitis

Parotitis is an inflammation of one or both parotid glands, the major salivary glands located on either side of the face, in humans. The location of these gland channels, along the upper jaw, leads to swelling and pain of inflamed salivary glands (Pic. 1).

Dry mouth (xerostomia), drooling, swelling (Pic. 2; Pic. 3), and pain are essentially the only symptoms caused by dysfunction of the salivary glands.

The exact pathogenesis of parotitis is still not completely understood. Reduced salivary flow is likely to be the most important factor, since it causes the repeated appearance of ascending infection in the parotid gland. This leads to further destruction of the secretory cells of the salivary gland (acin) and an increase in the mucous substances of the saliva, which aggravates the disease.

The presence of an accessory parotid gland (APG) is a fairly common anatomical variation. The incidence of APG ranges between 21 and 56%. The APG is a small gland with a diameter of 0.5–1 cm, and is located on average 6 mm anterior to and separate from the parotid gland. It has been found that 59% of patients with parotitis had an APG, which is a higher rate than that observed in healthy people. This suggests that the presence of an APG might be related to the pathogenesis of parotitis.

Possible causes of parotitis:

Dehydration

This is a common, non-infectious cause of parotitis. It may occur in elderly or after surgery.

Infectious parotitis

- **Acute viral parotitis (mumps):** The most common viral cause of parotitis is mumps - an infection that primarily affects the parotid glands, caused by the mumps virus which can impair male fertility. Routine vaccinations have dropped the incidence of mumps to a very low level. Mumps resolves on its own in about ten days.
  At the very beginning of infection, the virus attacks the testes, destroying the testicular parenchyma and reducing androgen (male sex hormones, such as testosterone) production. Most commonly they lead to fever and parotitis, and about 30% of male adolescents with mumps will develop orchitis. Because orchitis is the most common complication in men, the disease sometimes develops in adult patients. Orchitis can be unilateral or bilateral. Bilateral orchitis leads to oligosperma (low sperm concentration in semen) and testicular atrophy in 13% of those patients.
- **Acute bacterial parotitis:** is most often caused by a bacterial infection of Staphylococcus aureus (Pic. 4) but may be caused by any commensal bacteria.
- **Parotitis as Extrapulmonary Tuberculosis:** The mycobacterium (Pic. 5) that causes tuberculosis can also cause parotid infection. Those infected tend to have enlarged, nontender, but moderately painful glands. The diagnosis is made by typical chest radiograph findings, cultures, or histologic diagnosis after the gland has been removed. When diagnosed and treated with antitubercular medications, the gland may return to normal in 1-3 months.
- **HIV parotitis:** Generalized lymphadenopathy (abnormal size of lymph nodes) has long been associated
with HIV, but the localized enlargement of the parotid gland is less well known.

**Autoimmune causes**

- **Sjögren's syndrome:** Chronic inflammation of the salivary glands may also be an autoimmune disease known as Sjögren’s syndrome. The disease most commonly appears in people aged 40–60 years, but it may affect small children. In Sjögren syndrome, the prevalence of parotitis in women versus men is approximately 9:1. The involved parotid gland is enlarged and tender at times. The cause is unknown. The syndrome is often characterized by excessive dryness in the eyes, mouth, nose, vagina, and skin.

- **Lymphoepithelial lesion of Godwin:** Most frequently associated with a circumscribed tumor with the histologic features of Sjögren syndrome. This designation has also fallen out of favour.

**Blockage**

- Blockage of the main parotid duct, or one of its branches, is often a primary cause of acute parotitis, with further inflammation. The blockage may be from a salivary stone, a mucous plug, or, more rarely, by a tumor, usually benign.

The diagnosis of parotitis varies depending on the underlying causes and even the treatment consists of treating the symptoms.

The treatment of parotitis is always adjusted to the patient, and consists of a wide range of practices such as hydration, withdrawal of diuretic or anticholinergic drugs, the usage of nonsteroidal anti-inflammatory drugs, and the administration of antibiotics, when there is a suspicion of a bacterial infection.

Parotitis is associated with active dying and produces discomfort for the patient. There are certain measures that help preventing xerostomia and, thus, the emergence of parotitis, such as the use of substances increasing salivary secretion, the optimization of oral hygiene, the lubrication of the oral mucosa, and the local application of hot lint.

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**Gallery**

![Diagram of the parotid gland and submandibular gland](image1)

![Picture of a baby](image2)
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