

SYPHILITIC PAROTITIS

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Key-word: Parotid gland, inflammation

Background: A 45-year-old man presented with painless swelling of both parotid salivary glands. This swelling had been present for 1 year. Clinical examination showed a large, hard mass in the right parotid gland with diameter of more than 5 cm, a smaller similar lesion in the left parotid gland and lymphadenopathy of the right axilla.



Fig. $\frac{1}{2}$
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Work-up

Contrast-enhanced CT scan of the neck, section at the level of the parotid glands (Fig. 1) shows several sharply demarcated nodular lesions (arrows) in both parotid glands. Some of these lesions show central necrosis (arrowhead).

On contrast-enhanced CT scan of the neck, section at the level of the mandible, just caudal to Fig. 1. (Fig. 2), bilaterally, several small lymphnodes in the neck are disclosed (arrows).

Contrast-enhanced CT scan of the upper mediastinum, section at the level cranial to the aortic arch (Fig. 3) shows a large homogeneous mass in the right upper mediastinum (arrows).

Radiological diagnosis

Based on the CT findings the diagnosis of Warthin tumor, lymphoma or sarcoidosis was suggested. Biopsy of the parotid glands revealed *Treponema pallidum* and the diagnosis of *syphilitic parotitis* was made.

Discussion

Swelling of the parotid salivary glands is most commonly caused by infection or neoplasm.

Most frequently bilateral tumoral lesions of the parotid glands are Warthin tumor and lymphoma.

Warthin tumor, also known as adenolymphoma, manifests as a painless, slow-growing mass and is bilateral in up to 10% of cases. It is the most common lesion to manifest as unilateral, multifocal masses and is the most frequently occurring salivary neoplasm to manifest as multiple masses in one or both parotid glands.

Lymphoma may involve the salivary glands secondary to diffuse disease. It occurs in 1% to 8% of lymphomas and is most commonly seen with high-grade, diffuse large cell lymphoma. On CT secondary lymphoma of the parotid gland most often is confined to the intraparotid lymph nodes. Usually the nodes are homogeneous, however necrosis can occur.

Chronic inflammatory diseases of the major salivary glands can present in several ways. One

possible presentation is that of a slowly progressive, painless nodule in both glands.

Several infectious agents or inflammatory diseases can be responsible: tuberculosis, syphilis, cat-scratch disease and sarcoidosis.

Sarcoidosis is a systemic disease of presumed infectious etiology characterized by non-caseating granulomas involving multiple organ systems. The parotid glands are affected in 10% to 30% of patients.

In 83% of these patients bilateral chronic, non-painful parotid gland enlargement is present. On CT imaging the granulomas are usually multiple masses, and associated with adjacent cervical adenopathy.

Head and neck involvement in tuberculosis is rare. For cases that do affect the salivary glands, 70% involve the parotid glands.

Primary and secondary syphilis has a propensity to affect skin and mucosal surfaces. Tertiary syphilis tends to affect the central nervous system and the cardiovascular system. Syphilis rarely affects the parotid glands. When it does occur it has an appearance similar to that of sarcoidosis and TBC.

Cat scratch disease, an infection caused by a gram-negative bacterium can cause enlarged lymphnodes.

The parotid lymphnodes may be involved in the lymphadenopathy, mimicking other primary salivary gland diseases.

Necrosis is common in cat scratch disease.

Bibliography

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