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Case Report

Primary Tuberculous Parotitis with Facial Nerve Palsy: A Rare Presentation

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Abstract

Parotid tuberculosis is a rare and often overlooked cause of chronic parotid swelling, particularly when accompanied by atypical features such as facial nerve palsy. Given its clinical and radiological resemblance to neoplasms, this case underscores the necessity of ruling out tuberculous parotitis when evaluating chronic parotid swellings in tuberculosis-endemic areas. Early use of FNAC combined with molecular diagnostic techniques such as Truenat or GeneXpert allows for timely and accurate confirmation, enabling prompt initiation of antitubercular therapy. Timely treatment not only prevents unwarranted parotidectomy but also improves the likelihood of recovery from associated facial nerve dysfunction. Ultimately, heightened clinical awareness and early diagnostic evaluation are crucial for optimizing outcomes in this rare condition.

Keywords: Parotitis, Tuberculosis, Extrapulmonary TB.

Introduction

Extrapulmonary tuberculosis makes up about 20% of all cases.[1] Although tuberculous parotitis is typically seen secondary to a pulmonary infection, isolated or primary parotid involvement is a rare occurrence.[2] Parotid tuberculosis, although uncommon, poses significant diagnostic challenges due to its slow-growing nature, which often leads to delayed diagnosis. Its atypical presentation closely mimics benign and malignant parotid lesions, and in some cases, may even involve the facial nerve, further complicating clinical evaluation and therapeutic decision-making.

Case report

A 34-year-old male with no known comorbidities presented with a painless swelling over the left parotid and retroauricular region for the past two years. The swelling was insidious in onset and gradually progressive, with a noticeable increase in size over the past six months (Figure 1). The patient also reported deviation of the mouth towards the right side, suggestive of left facial nerve involvement from last 10 days. He denied fever, weight loss, night sweats and previous surgery in the recent past.

Routine hematological and biochemical investigations revealed anemia (9.3g/dl), leucocytosis (13.57*10^3/µL), thrombocytosis (414*10^3/µL), hypoalbuminemia (2.82 gm/dl), and elevated serum creatinine (3.27 mg/dl). His chest radiograph was normal. Ultrasonography of the swelling showed a heteroechoic lesion with internal cystic spaces and internal vascularity, possibly arising from the superficial lobe of the left parotid gland. Contrast-enhanced MRI of the neck revealed an ill-defined, lobulated lesion 31 × 29 × 27 mm involving the superficial lobe of the left parotid gland with multiple small cystic foci (Figure. 2).

Fine needle aspiration cytology demonstrated a mixed lymphoid population with transforming epithelioid cells against a necrotic background, findings suggestive of

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Figure 1: Clinical photograph of a patient displaying a swelling in the left parotid and retroauricular region.

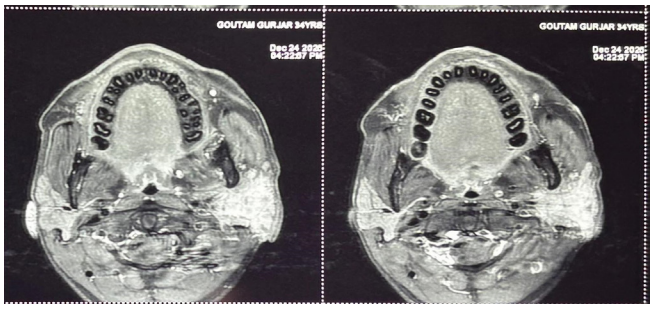


Figure 2: Contrast-enhanced MRI of the neck revealing an ill-defined, lobulated lesion (31 × 29 × 27 mm) involving the superficial lobe of the left parotid gland

granulomatous inflammation consistent with tuberculous etiology. Despite a negative Truenat assay, the patient was initiated on a standardized weight-banded antituberculosis therapy regimen due to high clinical and radiological suspicion. Subsequent follow-ups showed consistent clinical improvement.

Discussion

Tuberculous involvement of the parotid gland is a rare clinical entity, constituting less than 2.5 to 10% of salivary gland diseases.[1] Its rarity and nonspecific clinical presentation often result in diagnostic challenges. Patients typically present with a slow-growing, unilateral parotid swelling that clinically resembles neoplastic lesions. In endemic regions for tuberculosis, however, parotid tuberculosis should be considered in the differential diagnosis of chronic parotid swellings.

Tubercular parotitis was first reported in medical literature by C. DePaoli[2] in 1893. Parotid gland tuberculosis may occur in two forms:

1. Primary form due to direct infection of the gland or ductal system, which is uncommon.[3]

2.Secondary form, which results from hematogenous or lymphatic dissemination originating from a pulmonary or extrapulmonary focus.[3]

In our patient, the presentation was consistent with the primary form, as no other active tuberculous focus was initially identified.

Radiological imaging plays a supportive role but is not definitive. Ultrasonography typically shows a heterogeneous lesion with cystic or necrotic areas, while MRI may demonstrate irregular borders and mixed signal intensities, mimicking both benign and malignant tumors. However, imaging cannot reliably differentiate tuberculosis from neoplasms or other granulomatous diseases, necessitating cytological or histopathological confirmation.[5,6] Similar cases of parotid gland tuberculosis have been previously documented. These cases underscore that while the presentation often mimics a neoplasm, definitive diagnosis through comprehensive microbiological and histopathological assessment allows for highly effective conservative management using antituberculosis therapy.[7,8]

One of the most unusual features in this case was facial nerve palsy, which is rarely associated with parotid tuberculosis. The presence of facial nerve weakness may mislead clinicians toward malignancy, increasing the likelihood of unnecessary radical surgery.

The mainstay of treatment is standard antituberculosis therapy as per national guidelines, typically consisting of a two-month intensive phase followed by a continuation phase of four months or more, depending on patient response. As tuberculosis of the parotid gland responds well to specific antitubercular therapy, surgical intervention is generally reserved for cases of diagnostic uncertainty or a lack of response to medical treatment. This case highlights the importance of keeping tuberculosis in the differential diagnosis for chronic parotid swellings, especially in endemic regions, to avoid inadvertent surgical exploration. Prompt recognition and microbiological confirmation can help avoid misdiagnosis, unnecessary surgery, and morbidity.

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