Letter to the Editor

Re: Rapid diagnosis and successful drug therapy of primary parotid tuberculosis in the pediatric age group: a case report and brief review of the literature

We read with great interest the article entitled “Rapid diagnosis and successful drug therapy of primary parotid tuberculosis in the pediatric age group: a case report and brief review of the literature” by Nag et al.1 They have described a rare case of parotid tuberculosis in a pediatric patient with a review of the literature. We would like to report a similar case of parotid tubercular abscess in a 14-year-old female. We would also like to highlight the role of imaging and ultrasound-guided aspiration in diagnosis. The pre-operative diagnosis of tuberculosis helps to avoid unnecessary surgery.

A 14-year-old female presented with a progressively increasing swelling in the left parotid region of two-month duration. There was no relationship of swelling to meals. Swelling was not associated with any other symptoms. Her past history and family history was insignificant. Physical examination revealed a 3 x 3 cm mobile, cystic, non-tender mass occupying the superficial lobe of the left parotid gland. The overlying skin was normal. The complete blood count, erythrocyte sedimentation rate, other biochemical investigations, and chest radiograph were normal. Ultrasound examination revealed a well-defined, unilocular, anechoic lesion with mobile internal debris involving the superficial lobe of the left parotid gland. The lesion was hypointense on T1-weighted imaging and hyperintense on T2-weighted imaging with peripheral rim enhancement (Figure 1). An intra-parotid node was also seen involving the superficial lobe of the left gland showing peripheral rim enhancement. The differential diagnosis included parotid abscess, tuberculous parotitis, and infected branchial cyst. Ultrasound-guided aspiration of the lesion stained with the Ziehl–Neelsen stain showed acid-fast bacilli. A diagnosis of tubercular parotid abscess was made and the patient was started on antitubercular drugs. A follow-up ultrasound at 6 months showed resolution of the abscess and intra-parotid node.

Tuberculosis is a chronic granulomatous infection caused by Mycobacterium tuberculosis, and it affects many organs. Tuberculosis of the parotid gland is rare even in countries where the disease is endemic.2–6 Tuberculous parotitis can be classified into a ‘focal form’ resulting from infection of intra- or periglandular lymph nodes, and a ‘diffuse form’ in which the parenchyma is involved diffusely.2–6 The focal form is more common than the diffuse form.

Probable routes of infection spread to the parotid gland include hematogenous, lymphogenous, and retrograde spread through the salivary duct. The clinical presentation of tuberculous parotitis is highly variable. Parotid swelling is variable in size, shape, and consistency (firm/fluctuant), and occurs with or without the presence of fistula and lymphadenopathy. Associated pulmonary tuberculosis or a tuberculous infection of other organs is seen in less than 50% of cases. The clinical diagnosis of parotid tuberculosis is quite difficult if there is no history of pulmonary tuberculosis and constitutional symptoms.5,6

Imaging features are non-specific. Reported computed tomography appearances include a homogeneously enhancing solid nodule, multiloculated rim enhancing nodule with central lucency, and enhancing solid nodule with an eccentric non-enhancing microcyst.2,7 Because of the wide variation of clinical manifestations, a pre-operative diagnosis is relatively difficult and the majority of cases undergo unnecessary surgery. Chou et al.8 diagnosed eight cases in their series of nine cases of parotid

Figure 1. Post-contrast axial image: (A) demonstrates a rim enhancing abscess involving the superficial lobe of the left parotid gland (arrow); (B) is an image caudal to A, and shows the presence of a necrotic intra-parotid node involving the superficial lobe of the left parotid gland (curved arrow).
tuberculosis on the basis of sonographically-guided aspiration for acid-fast bacillus stains, cytological study, and cultures for Mycobacterium. They concluded that sonographic examination and sonographically-guided fine-needle aspiration contributes substantially to the diagnosis of parotid tuberculosis infection. Parotid tuberculosis, though rare, should be included in the list of differential diagnoses for a parotid mass, especially in the presence of rim enhancement and associated necrotic adenopathy. The prognosis is good if treated properly with antitubercular drugs.2,5

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References


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