

CASE REPORT

Facial nerve abscess in a case of leprosy – a case report

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Abstract

A 14-year old boy presented with lagophthalmos of the left eye for ten days. Physical examination revealed a hypo-pigmented macule on the left cheek and a nodular fluctuant swelling in the left pre-auricular region. A skin biopsy showed evidence of borderline tuberculoid Hansen's disease and the lepromin test was positive. The swelling was diagnosed to be a facial nerve abscess. He was started on tapering doses of corticosteroids and World Health Organization pauci-bacillary multi drug therapy. The swelling subsided over the next one month and the facial paralysis improved gradually with treatment.

INTRODUCTION

Nerve abscesses are an unusual presentation of leprosy. They are usually found in patients in the paucibacillary spectrum of the disease.¹ Abscesses occur due to caseation of nerve fasciculi leading to cold abscess formation.² Occurrence of nerve abscesses has been described in most major nerve trunks, with the ulnar nerve being the commonest. The nerves of the face and neck are rarely involved, accounting for 1.3% in some case series.² We present an unusual case of a facial nerve abscess in an adolescent with borderline tuberculoid leprosy.

CASE REPORT

A 14 year old boy presented to our out patient department with complaints of being unable to close the left eye, associated with redness and watering for the past ten days. There was no history of ear-pain or trauma to the head and neck. There was no history of fever and joint pains. Examination revealed lagophthalmos on the left side, an ill-defined hypopigmented macule over the left cheek, and a nodular, fluctuant, tender swelling in the left pre-auricular region. The ophthalmic division of the facial nerve was palpable which lead to the swelling. No other peripheral nerves were thickened. A skin biopsy was performed and revealed epidermis showing basket weave orthokeratosis, and the dermis

showed few focal granulomas composed of lymphocytes and epithelioid cells around the blood vessels and skin adnexa. Partly destroyed dermal nerves were seen within the granulomas. The granuloma fraction was 30%. Acid fast staining showed occasional bacilli in the granuloma. The lepromin test was positive. Hence a diagnosis of borderline tuberculoid Hansen's disease (BTBD) with a facial nerve abscess was made.

He was started on tapering dose of oral Prednisolone at a dose of 40 mg once daily which was tapered gradually and World Health Organization Pauci-bacillary Multi Drug Therapy. The abscess resolved over the next one month. Facial weakness also improved with galvanic stimulation and medical treatment.

DISCUSSION

Nerve abscesses are an uncommon presentation of leprosy. They are commonly found in the paucibacillary spectrum of the disease.³ The hypothesis is that they are formed due to anoxia produced by stretching and pressure on the nerve secondary to inflammation and vascular damage. These processes also lead to release of serotonin, which further worsens the edema.⁴ A vicious cycle results, causing avascular necrosis of the nerve and the formation of a cold abscess.²

The ulnar nerve is the most frequently involved nerve. Involvement of the facial nerve is rare. The incidence of involvement of face and neck nerves

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in a large case series was found to be 1.3%.²

In our case the diagnosis of a facial nerve abscess was made on clinical grounds in view of the acute presentation of lagophthalmos with a nodular swelling of the facial nerve with histological evidence of BTHD. The diagnosis was also supported by the disappearance of the swelling following treatment. The differentials that can be considered in such a case are Bell's palsy and peripheral nerve tumor.⁵ Diagnostic modalities that can help confirm the diagnosis include ultrasonography and MRI, the gold standard being demonstration of the abscess by surgical exploration.⁵

The treatment options for a facial nerve abscess include, tapering doses of steroids and surgery. The indications for surgery are pain not controlled by steroids, requirement of high dosages of steroids, and increasing sensory and /or motor deficit. Surgery is advised because it causes less morbidity than long-term steroids.² Our patient showed a satisfactory response to oral steroids hence he was treated conservatively.

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