Available online at www.sciencedirect.com
ScienceDirect
journal homepage: http://www.journals.elsevier.com/indian-journal-of-tuberculosis/

Case Report

Sinonasal tuberculosis: Report of three atypical cases

Junaid N. Malik, Sabeena Jan, Seema Monga *, Sudhir Bahadur*

HIMSR & HAHC Hospital, Otorhinolaryngology & Head & Neck Surgery, Jamia Hamdard, Hamdard Nagar, Delhi 110062, Delhi, India

ARTICLE INFO

Article history:
Received 30 March 2015
Accepted 2 June 2015
Available online xxx

Keywords:
Primary sinonasal tuberculosis
Proptosis
Paranasal sinuses
Ethmoid sinus

ABSTRACT

Primary sinonasal/nasal tuberculosis is rare amongst the commonly seen cases of extrapulmonary tuberculosis.

We report three cases, two of primary sinonasal tuberculosis and one case of nasal tuberculosis in otherwise healthy patients. The diagnosis was based on radiological and histopathological findings. Treatment with antitubercular drug therapy was successful in all three of them.

Sinonasal region tuberculosis, despite its rarity, should be added to differential diagnosis of nasal and paranasal sinus disorders particularly with intractable symptoms. Radiological imaging and nasal endoscopy with biopsy should be supplemented for confirmation.

1. Introduction

Tuberculosis, considering the entry of infection, most frequently affects the lungs. However, during the past two decades, extrapulmonary tuberculosis has emerged as a major public health problem, and it mainly manifests in the head and neck region. Cervical tuberculous lymphadenopathy is its most common form.[1] Nasal and sinonasal tuberculosis, either primary or secondary to pulmonary infection, is rare and very few cases have been reported in literature. Sinonasal tuberculosis is generally secondary to either a pulmonary tuberculosis or a retrograde involvement of the nose by lupus vulgaris of the facial skin. Only rarely it presents as a primary disease, which may be caused by infected aerosol inhalation or traumatic inoculation by fingers.[2] We report atypical clinical presentations, management and outcome in three immunocompetent patients with histopathologically confirmed nasal and sinonasal tuberculosis but no pulmonary involvement.

2. Clinical cases

2.1. Case I

A 5-year-old boy presented to ENT OPD with symptom of painless right-side proptosis of 2 months duration. He had no nasal symptoms. The child had fever and decreased appetite. Local examination revealed right proptosis, with normal eye movements and normal visual acuity (Fig. 1a).

The anterior rhinoscopy was normal. However, the right ear examination revealed presence of granulation tissue. The Hb was 9 g%, ESR was 24 mm and sputum was negative for AFB staining. Similarly HIV and HBsAg tests were negative.

* *Corresponding author*. Tel.: +91 9811124342.
E-mail address: dr.seema.monga@gmail.com (S. Monga).
http://dx.doi.org/10.1016/j.ijtb.2015.06.001

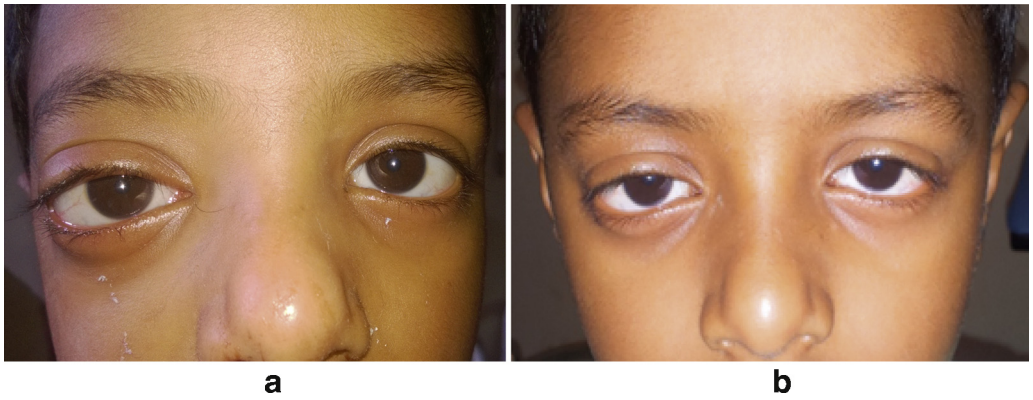

Fig. 1 – Proptosis at presentation (a) and after 6 months follow-up (b).

Remaining investigations including RBS and kidney function tests (KFT) were normal.

The CT scan of nose and paranasal sinuses (PNS) suggested right-sided complete opacification of ethmoid sinuses, with erosion of lamina papyracea. There was also presence of small subperiosteal abscess along superomedial aspect of the right orbit (Fig. 2). His chest X-ray was normal. Diagnostic nasal endoscopy was carried out under GA and biopsy was taken from a friable mass involving the ethmoid sinuses. Histopathology revealed presence of sinonasal tuberculosis.

He was started on antitubercular treatment. Two months later, his proptosis had completely disappeared, and six 6 later, he was disease free (Fig. 1b).

2.2. *Case II*

A 30-year-old man presented with history of intractable pain, epistaxis and nasal obstruction for a short duration of 15 days. Local examination revealed broadening of dorsum of nose with mild tenderness. Anterior rhinoscopy showed mucopurulent discharge with congested and edematous mucosa. His ESR was 32 mm and Mantoux was positive. The remaining investigations, including haemogram, KFT, sputum examination and tests for HIV, HBsAg and ultrasonography abdomen, were normal.

The CT scan of PNS was suggestive of ethmoid sinusitis with edematous septum (Fig. 3). Chest X-ray was normal. Nasal endoscopy revealed septal mucosa was boggy, friable and extremely tender. Both the middle turbinates and ethmoid sinuses were oedematous. Biopsy was taken from friable lesion involving the septal and edematous ethmoid sinus mucosa. HPE was suggestive of sinonasal tuberculosis.

The patient was started on antitubercular treatment. He showed excellent response to treatment with quick resolution of symptoms and was disease free after 6 months of therapy.

2.3. *Third III*

A 34-year female housewife presented with complaints of progressively increasing left-side nasal obstruction, and epistaxis off and on for the previous 6 months. There were no other constitutional symptoms. Anterior rhinoscopy showed left-side reddish-pink granulations arising from the nasal mucosa that bled on touch (Fig. 4a). Neck examination revealed bilateral submandibular lymphadenopathy, which was not significant. The remaining clinical examination was essentially normal. Routine investigations, including X-ray of the chest, were normal. The ESR was raised (28 mm). Mantoux was positive (20 × 20 mm).

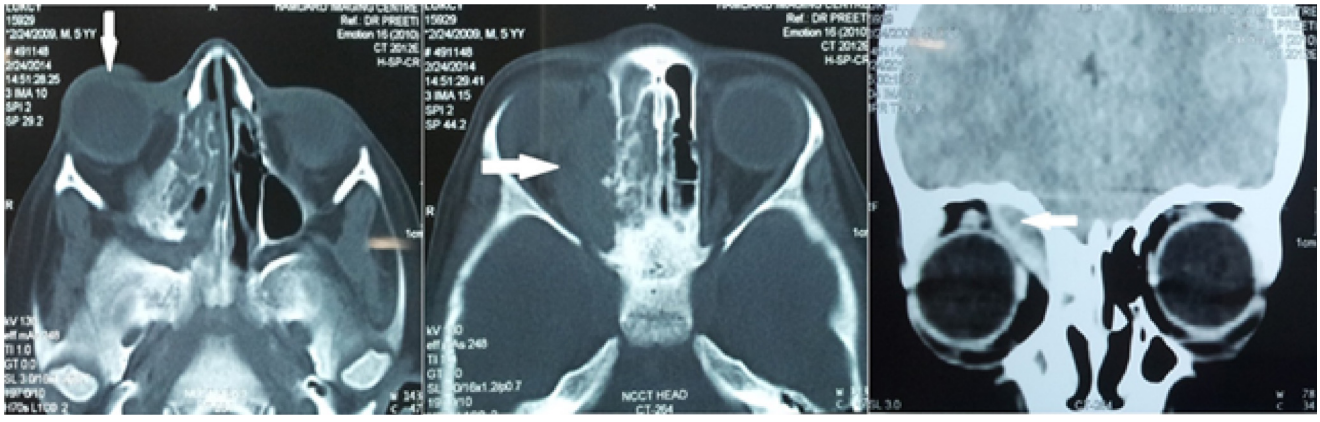

Fig. 2 – CT cuts showing right proptosis and periorbital abscess.

Please cite this article in press as: Malik JN, et al. Sinonasal tuberculosis: Report of three atypical cases, *Indian J Tuberc.* (2016), http://dx.doi.org/10.1016/j.ijtb.2015.06.001