CASE STUDY

Primary Nasal Tuberculosis as the Origin of Submaxillary Adenopathy☆

Tuberculosis nasal primaria como origen de adenopatía submaxilar

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We present the case of a 75-year-old woman with a history of insulin-dependent diabetes mellitus, arterial hypertension, dyslipidemia and serious congestive heart failure. She consulted in the emergency department due to a tumour in the left submaxillary region which had developed over more than 4 months, with progressive growth and considered to be an adenophlegmon, treated with amoxicillin and clavulanic acid 875/125 mg during 2 weeks with no clinical improvement.

Physical exploration found a tumour measuring 3 cm×4 cm in the left submaxillary region, indurate, not adhered to deep planes and without other alterations. Luekocytosis was observed in blood analysis (11 300×10e9/l) with segmented neutrophils (75.3%). Serologies were performed for HIV, VEB and hepatitis, and all were negative.

CT of the neck was performed with contrast. This showed the left para-oropharyngeal neoformative process with multiples adenopathies in all of the cervical spaces, most especially a retropharyngeal one and the largest in the left

lb space, which in turn presented a cystic-necrotic centre (Fig. 1).

FNA showed abundant polymorphonuclear cells without bacterial growth in conventional cultures, and pathological study showed a necrosis granulomatous lesion.

A PET-CT showed pathological hypercaptaion of the right nasal fossa, the cavum and the rear parapharyngeal region, which is suspicious of malignity (Fig. 2).

Nasal endoscopy showed a friable exophytic lesion hanging from the head of the lower left concha, and a biopsy was taken. Likewise a new FNA was performed on the cervical adenopathy, to study Mycobacterium tuberculosis given that the result of Ziehl–Neelsen (Z–N) staining was negative, although M. tuberculosis complex grew in the culture and PCR was positive for the same.

Biopsies of the nasal mucosa (cavum, left lower concha and nasal vestibule) were positive for Z–N staining and granulomatous inflammation was observed, together with necrosis. The respiratory study ruled out lung involvement and anti-tuberculosis treatment was administered (Rifampicin and Isoniazid during 4 months, Pirazinamide for the first 2 months) and the lesion in the nasal mucosa greatly improved in approximately 1 month.

It must be clarified that no study of contacts was made due to the fact that this is not recommended in cases of tuberculosis outside the lungs, except in cases of recent infection, children and HIV positive contacts.1

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Discussion

The epidemiology of tuberculosis has changed in recent decades. In 2011 the incidence rate was 14.63 cases per 100,000 inhabitants in Spain, 6.8% less than it was in 2010, and 11.6% of these cases were outside the lungs. It is rare for *M. tuberculosis* to infect the nasal mucosa nasal, due to its bactericide secretions, cilia movement and the presence of nasal vibrissae. This location is usually secondary, normally to a pulmonary origin, although primary infection of the nasal mucosa may be due to nasal trauma or atrophy of the nasal mucosa.

Primary nasal TBC is a very rare disease. Butt revised the cases published during the 20th century and found 35 cases of nasal tuberculosis, of which only 12 were primary nasal tuberculosis.

Nalini undertook a retrospective study of a total of 117 cases of tuberculosis within the head and neck, and of these none presented nasal tuberculosis, while cervical adenopathy was the most frequent form (95%).

The clinical manifestations of nasal tuberculosis are completely non-specific, and they run from nasal obstruction, mucopurulent rhinorrhea, epistaxis and scabs in the mucosa, to exceptional cases causing epileptic crises.

The non-specific nature of the symptoms and rarity of a nasal location usually lead to delay in diagnosis.

Thus although the several imaging tests (CT, MR and even PET-CT) help to locate and delimit lesions, they lack diagnostic specificity. In our case PET-CT made it possible to locate the origin in the nose, together with CT it hindered diagnosis due to the rarity of this entity.

Due to the presence of a nasal granulomatous process differential diagnosis was made against malignant processes (high-grade lymphoproliferative diseases), inflammatory granulomatosis (Wegener, sarcoidosis, leprosy or syphilis) and viral, parasitic or fungal infections. Due to all of these considerations, it is indispensable to have biopsy samples for pathological study and microbiological culture, even though the result of the latter is negative in up to 50%–75% of cases. Once a tuberculous process has been identified, the presence of pulmonary tuberculosis must be ruled out, together with systemic tuberculosis or in other locations.

Treatment consists of antituberculosis drugs, which achieve a rapid and complete response in the majority of cases. In a series of 50 cases of nasopharyngeal tuberculosis by Jian et al., all of the patients were disease-free at 2 years. It is important to apply a high level of diagnostic suspicion when the said symptoms are found, due to the increasing prevalence of this disease over recent decades, and because it is an infection that can be treated with good response to medication.

Conflict of Interests

The authors declare that they have no conflict of interests.

References