



An unusual location of cutaneous tuberculosis in the child: The pinna

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CASE REPORT

ABSTRACT

Cutaneous tuberculosis represents less than 1% of all TB cases occurring in children. The pinna location is exceptional. We present the case of an immunocompetent, vaccinated 9 year-old girl, who showed a chronic skin lesion of the right ear, unimproved by antistaphylococcal treatment. The histology showed a cutaneous tuberculosis and the six-month antituberculous treatment was efficient. The diagnosis of tuberculosis must be kept in mind in any chronic ear damage especially in TB endemic countries.

Key words: tuberculosis, pinna

INTRODUCTION

Cutaneous tuberculosis is particularly frequent in developing countries but the pinna is rarely involved. Tuberculosis in this location represents less than 1% of chronic diseases of the ear. The involvement of the ear is in fact a specific location of cutaneous tuberculosis and, although its presentation may be very variable, it usually manifests itself as a slowly evolving plaque of skin with an irregular, friable surface and sometimes with papular elements. (1, 2)

MATERIALS AND METHOD

Case report :

A 9 year-old girl, vaccinated, with no medical history of personal or family tuberculosis showed a small vesicle of the posterior surface of the pinna of the right ear. The lesion reached 1,5 cm in its largest diameter in 15 days without fever or weight loss. The examination showed a 1,5 x 1cm softened and fistulized lesion with a double and irregular ulceration, purplish edges and yellowish purulent background (Fig 1)

Moreover, the patient reported no otorrhea, and palpation showed no lymphadenopathy. Otoscopy of the ear canal and eardrum was normal. The rest of physical and general examination was unremarkable. This lesion was treated with anti-staphylococcal antibiotics without improvement. Skin biopsy showed epithelioid and giant cell granuloma with many foci of caseous necrosis. Diagnosis of tuberculous gum was made. The tuberculin skin test (TST) was positive at 18mm. The HIV serology was negative. The chest X-ray and ENT examination showed no other tuberculous location.

The patient was given a six-month anti-tuberculous treatment : 2RHZE/4RH (R :Rifampicin 10 mg/kg/ j, H :Isoniazid 5 mg/ kg/ j, Z :Pyrazinamid 25 mg/ kg/j), with a satisfying uneventful evolution and a complete remission(Fig. 2).

RESULTS AND DISCUSSION

Cutaneous TB represents less than 1% of all pediatric cases of TB. Cutaneous TB displays a male predominance,with a peak of incidence in early adolescence. In the absence of immunodeficiency, the TST is usually positive. Unlike other forms of extrathoracicTB, systemic involvement is seen in only a minority of children (most commonly with a respiratory source). As symptoms may mimic other dermatological diseases,

prolonged symptom duration (up to 10 years) prior to diagnosis is usual (3,4,5) In Morocco, tuberculosis is still endemic. In terms of frequency, cutaneous tuberculosis comes in fifth position after the pleuro-pulmonary, lymph node, urogenital and digestive locations and mainly affects young people. In a series of 30 cases of cutaneous tuberculosis in children, the clinical features were as follows: Gumma 46.6%, scrofuloderma 36.6%,lupus vulgaris 13.3% and skin tuberculosis chancre 3.3%.(6)

Gumma and scrofuloderma were the most frequent forms as in other Moroccan series(7).

The scrofuloderma usually occurs in adulthood in both sexes. The lesion is often unique with an average size of 3 to 5cm, Tuberculous gum lesions are rare, and present as cold, metastatic abscesses. They are rarely described and sometimes neglected. If their clinical appearance is similar to that of the scrofuloderma, their pathophysiology is different. Dissemination of the Koch bacillus in subcutaneous tissue occurs during a bacillemia, from a distant tuberculous focus.

The gums can be part of an array of miliary tuberculosis. Sometimes, the initial focus is not identified and we speak of a silent bacillemia (8). Reactivation of quiescent KB may occur after local trauma (9), non-specific inflammation, or when local or general cell-mediated immunity is affected. Moreover, gums often occur in malnourished children or immunocompromised patients, especially in tropical countries. The gums are often multiple asymmetric, of variable size (3 to 10 cm in major axis) located in the limbs, the chest wall, the buttocks, the forehead and the penis (8)

They present as single or multiple subcutaneous nodules. They grow, fluctuate and may break down the overlying skin to form draining sinuses unless incised and drained surgically.They can occur anywhere in the body, and are often multiple in the malnourished or immunodeficient but usually single in healthy immunocompetent adults.They are a bad prognostic sign in the former group, but in the latter, may drain chronically for months to years and ultimately resolve without antibacterial treatment. Although the diagnosis is easily made with material obtained at surgery, it is usually not suspected preoperatively(10)

Histology shows suppurative granulomas with nonspecific infiltrates. Direct examination of the pus will usually demonstrate the presence of the mycobacteria. The tuberculin test is usually positive but may be negative if associated with poor general condition. (2). The culture is often positive when the biopsy is correctly made (11). Radiological and biological explorations may be useful to

find the original location (8). Differential diagnosis includes other causes of cold abscess such as syphilitic Gumma, leishmaniasis, and deep fungal infection(10).

Because most cases of TB of the skin are related to tuberculous disease of other organs and the bacillary load in the skin is usually less than elsewhere, treatment regimens, such as used to treat pulmonary TB, should be sufficient. This will include schemes of directly observed therapy short course.

Standard therapy regimes involving 2 months of quadruple therapy (isoniazid, rifampicin, pyrazinamid, and ethambutol) followed by a further 4 months of isoniazid plus rifampicin) are adopted in most centers(2). A clinical response can be expected after 4 to 6 weeks of treatment(12

CONCLUSIONS

Cutaneous tuberculosis should be mentioned as a differential diagnosis in all chronic skin lesions of the external ear in children especially in endemic countries even in the absence of pulmonary symptoms.

Consent : Written informed consent was obtained from the patient's father for publication of this case report and any accompanying images.



Figure 1: Ulcerated granulomatous lesion of the right pinna before treatment



Figure 2: The pinna at the end of treatment.

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