Extra-pulmonary tuberculosis: three clinical case reports

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Abstract

Tuberculosis still remains an important public health issue. Sometimes it has unexpected forms of presentation and evolution.

The authors present three case reports of extrapulmonary tuberculosis in which there have been difficulties in the diagnosis and treatment.

The first case report initially presented with clinical criteria of a Tolosa-Hunt syndrome but the clinical evolution leading to the diagnosis of a tuberculous brain abscess. The second case is of a patient with multiple osteolytic lesions of the chest wall resembling a neoplastic process. Mycobacterium tuberculosis was isolated from the lesions. The last case describes a patient with pulmonary tuberculosis and epididymo-orchitis evolving unfavourably in spite of in vitro sensitivity to the instituted therapy.

Tuberculosis must be kept in mind in the differential diagnosis of many unexplained organic lesions.

Key words: tuberculosis, extrapulmonary tuberculosis, Tolosa-Hunt syndrome, cerebral abscess, bone tuberculosis, epididymo-orchitis.

Introduction

Despite the diagnostic and therapeutic advances of Medicine today, tuberculosis continues to be a major public health problem.[1]

Recent data from the World Health Organization indicate that around twenty million patients have active tuberculosis. The factors that contribute to this high incidence include an increase in cases of infection by the human immunodeficiency virus (HIV), and the appearance of forms that are multiresistant to tuberculostatic therapy.[2]

In Portugal, according to data from the Health General Directorate (DGS), in 1995, a total of 5577 cases were reported, corresponding to an incidence of fifty-six cases per hundred thousand inhabitants. Of these, the majority consisted of pulmonary tuberculosis, with 31.5% being extrapulmonary forms.[3]

It appears that there is a higher incidence of the extrapulmonary forms among ethnic minorities, in the industrial belt of the large urban centers, and among drug dependants and individuals with HIV.[4]

The specific processes with extrapulmonary localization can appear as a single focus, concomitantly with pulmonary process, or as part of a process involving multiple organs. In this context, they lead to various forms of presentation, which create diagnostic difficulties and attest to the need to consider tuberculosis in the differential diagnosis of multiple clinical presentations.

Independently of the factors mentioned that can cause tuberculosis infection, its evolution may be unpredictable and not always satisfactory.

The authors describe three clinical cases of tuberculosis which, due to their form of presentation and evolution, create marked difficulties in the diagnosis and therapeutic approach.

Clinical cases

Case 1

C.A.C.T., 49 years of age, male, Caucasian, born and residing in Apelação (Loures). History of pulmonary tuberculosis.

Healthy until 15 days previously, he was admitted with right hemicranial headaches and paresis of the VI cranial pair on the right side; objective examination showed no other alterations.

Cranioencephalic computed axial tomography

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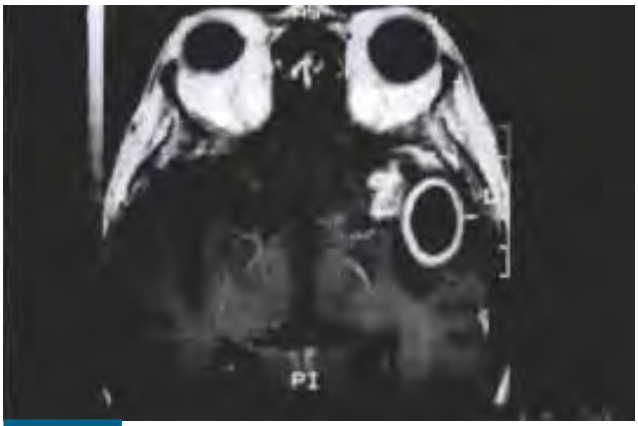

FIG. 1

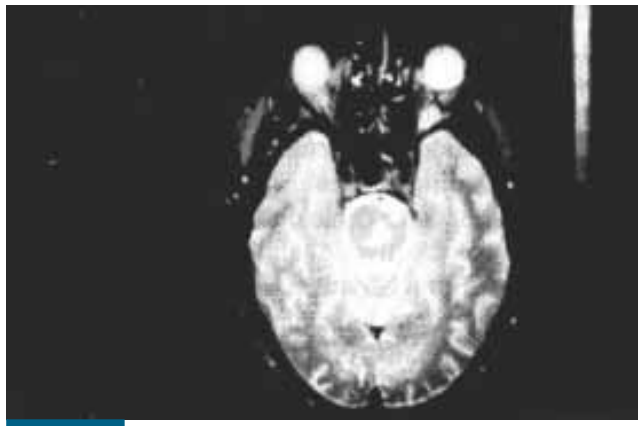

FIG. 2

(CAT-CE) showed no structural alterations. Analytical results: sedimentation rate (SR) 31 mm/1st h, leukocytosis 13,000/mm3 with 78.5% of neutrophils (N); hepatic and renal functions normal, serology for HIV 1 and 2 and VDRL negative.

Due to persistence of the symptoms, a new CAT-CE was performed (without alterations), lumbar puncture (LP) CSF without cytochemical or bacteriological alterations), nuclear magnetic resonance imaging (NMRI) CE (without cranioencephalic structural alterations) and Mantoux test (area of hardening greater than 10 mm at 72 hours).

A diagnosis of Tolosa-Hunt syndrome was proposed, for which corticotherapy was administered (prednisolone 40 mg/day for 10 days, followed by 80 mg/day). After one month of hospitalization, the clinical symptoms worsened, with alterations in state of consciousness, subfebrile temperature, and stiffness of the neck. Leukocytosis (24,500/mm3) with 95% N and ESR of 75 mm/1st h.

New LP revealed "rock crystal" CSF with 1283 cells/mm (prevalence of polymorphonuclear cells), proteinorrachia of 125 mg/dL, glycorrhachia of 53 mg/dL (for glycemia of 160 mg/dL), with bacteriological exam, including test for Koch's bacillus (BK), negative. Bacterial/tuberculosic meningitis was diagnosed, and empirical therapy was begun with ampicillin and chloramphenicol + tuberculostatics [isoniazid (INH) + rifampicin (RIF) + etambutol (ETM) + pyrazinamide (PZA)].

On day 10 of therapy, the paresis persisted, the headaches and leukocytosis disappeared, SR was normal, and LP revealed CSF without alterations. The ampicillin and chloramphenicol were suspended and the tuberculostatics were kept. The CAT-CE was repeated: "temporal meningeal-parenchymatous abscess on the left and granuloma/intraorbital abscess on the right: probably specific meningitis. "NMRI-CE confirmed the lesions described in the CAT.

Under tuberculostatic therapy (2 months of INH, RIF, ETM and PZA + 7 months of INH and RIF), there was slow, but gradual clinical and radiological improvement, with disappearance of the paresis by the third month and improvement in the imaging alterations by the sixth month.

Case 2

L.G., 35 years of age, male, Black, born in Guinea-Bissau and residing in Loures for two years.

Patient was admitted for investigation of a mass on the thoracic wall with six months of evolution. Good general condition and nutrition, subfebrile. Right juxta-axillary mass of 5x3 cm in diameter, painful, with hard consistency, adhering to the deep layers (continuation from the costal arch) and enlarged axillary lymph node of 1.5 cm in diameter.

Chest radiography: osteolytic lesions of the 4th costal arch on the right, 6th costal arch on the left, and pedicle of the 12th dorsal vertebra. Analytical results: ESR 38 mm 1st h, serologies for HIV 1 and 2, Hudlesson and hemocultures, negative; other analyses without alterations. Mantoux test (1 PPD unit): area of hardening of 20 x 20 mm, at 48 h. Chest CAT: several osteolytic lesions involving the costal arches, bilaterally, and the vertebral body of the 12th dorsal (D12), with intracanalicular extension. Biopsy of the ganglions and thoracic mass: chronic granulomatous process in response to micobacteria. Tuberculostatic

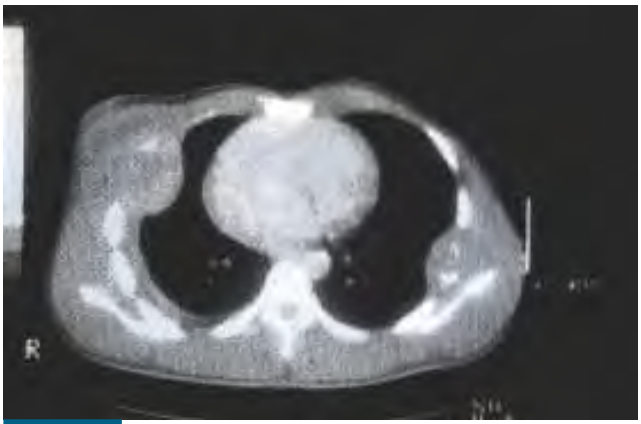

FIG. 3

therapy was initiated (INH + RIF + ETM + PZA).

"Surgical cleaning" of D12 and fixation of the vertebral body were proposed, which was refused. Reobserving the patient at six weeks, a clinical improvement was noted. The patient left the country.

Case 3

P.G., 44 years of age, male, Black, born in Guinea-Bissau and residing in Loures for three years.

Admitted for asthenia, anorexia, weight loss, productive cough and night sweating. Subfebrile, poor general condition and nutrition, with a painful 3 cm mass at the upper extremity of the right testicle. No other alterations on clinical examination. Analytical results: ESR 96 mm/1st h, serologies for hepatitis, HIV 1 and 2, negative.

Chest radiography: bilateral, heterogeneous, micronodular infiltrate, which is more marked in the upper half of the hemithorax. Testicular ultrasound: "... right epididymus swollen, with heterogenous echostructure; homolateral testicle with normal dimensions, irregular contours and multiple hypoechogenic foci. Alterations suggestive of specific orchiepididymitis. "Mantoux test (10 PPD unit): area of hardening of 20 x 20 mm, at 48 h. BK test in the gastric juice: positive. Tuberculostatic therapy was initiated (INH + RIF + ETM + PZA).

During hospitalization, patient had complaints of odinophagia with hypertrophy and ulceration of the right tonsil.

Tonsil biopsy: pavimentous cell carcinoma moderately differentiated, infiltrative. No evidence of metastization. In the absence of indication for surgery, radiotherapy was scheduled. At the end of two months of tuberculostatic therapy, the clinical symptoms persisted. Onset of convulsive crises, with neurological exam, CAT, CE, LP and electroencephalography (EEG); all normal. New BK test in the gastric juice: positive in 2 of the 3 samples. Patient was diagnosed as resistant to tuberculostatics. He was transferred to isolation at the Unit for Infectious-contagious diseases, where he died following a convulsive crisis. Test for sensitivity to tuberculostatics, known a posteriori, proved sensitivity in vitro to the therapy administered.

Comments

The three clinical cases presented a paradigmatic of the diagnostic and therapeutic difficulties that tuberculosis frequently involves. In the first case, in which the various complementary diagnostic methods used did not provide any clarification, we believe that the corticotherapy, administered based on the hypothesis of Tolosa-Hunt syndrome, was decisive in the diagnostic progression. This syndrome, which consists of a painful ophthalmoplegia by idiopathic granulomatous involvement in the cavernous sinus, typically responds to corticotherapy.[5,6] In the present case, however, there was a clinical worsening, with meningitis and subsequent identification of intracranial lesions that regressed with tuberculostatic therapy. The presence of leukocytosis and prevalence of polymorphonuclear leukocytes in the CSF, possible in an initial phase of tuberculostatic infection, led to the institution of non-specific antibiotic therapy. The regression of the intracranial abscess and the granulatoma, under tuberculostatic therapy, enables us to affirm the tuberculosic etiology, even though the agent was not isolated.

As for the second case, the form of presentation is highlighted, with multiple disperse osteolytic lesions more suggestive of neoplastic secondarism. Biopsy of the lesions enabled the identification of a chronic granulomatous process and isolation of BK. In this case, despite the favorable evolution with therapy, it was not possible to verify the complete healing of the lesions.

The third case relates to a patient with active pulmonary tuberculosis, with concomitant epididymal-testicular lesion. The conjugation of the clinical data with the ultrasound aspects enabled us to propose a diagnosis of specific orchiepididymitis, even in the absence of the histological exam. Despite the therapy

administered, a gradual decline in the patient's general condition was observed, which was probably related to the concomitant tonsil neoplasia. Later, the occurrence of convulsions leading to death was not explained, although neoplasic secundarism or infection of the central nervous system were ruled out. The persistence of BK in the gastric juice leads us to accept resistance of antibacillary agents, which was not proven by the sensitivity test in vitro. Thus, we were obliged to admit a state of immunodepression, the cause of which was not completely clarified, but which determined the entire evolution.

Through these cases, we seek to show that tuberculosis sometimes manifests with less typical clinical symptoms. Thus, tuberculosis should be included in the differential diagnosis of lesions of various organs, and the suspicion should be reinforced if there is a previous history of this disease. According to data from the DGS for 1995,[3] in a considerable proportion of cases (28.5% of pulmonary forms and 43.5% of extrapulmonary forms) the bacillus is not isolated in the affected organ. In these cases, the diagnostic is inferred by the concomitant presence of pulmonary tuberculosis (3rd case), a previous history of the disease (1st case) or response to tuberculostatic therapy (1st case). Supporting the relationship described between the occurrence of extrapulmonary processes and some risk groups, two of the patients belonged to an ethnic minority and all three lived in the industrial belt of Lisbon (council of Loures). ■

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