MEDICALLY MANAGED PSEUDO-TUMORAL FORM OF HEPATIC TUBERCULOSIS

TUBERCULOSE HEPATIQUE DANS SA FORME PSEUDOTUMORALE TRAITEE MEDICALEMENT

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Abstract

Hepatic tuberculosis is rare and difficult to diagnose in an immunocompetent individual with no evidence of tuberculosis (TB) in the lung. We report a case of pseudo-tumoral form of hepatic TB treated medically. A 21 year old man presented with 10-month history of upper abdominal pain and weight loss, abnormal liver function, and raised inflammatory markers. Abdominal computed tomography (CT) scan revealed two lesions measuring 8 and 7 cm respectively, and occupying the right lobe of the liver. A guided liver biopsy of the lesion gave inconclusive results. Six months later, the patient was readmitted with cervical lymph nodes. Subsequent lymph node biopsy and histology revealed granulomatous inflammation suggesting tuberculosis. Following anti-tuberculous therapy, repeated CT scan revealed a regression of the initial findings. The current case illustrates the diagnostic difficulties of isolated hepatic TB and the importance of the medical therapeutic approach.

Keys words: Pseudo-tumoral; Tuberculosis; Liver; Anti-tubercular drugs.

Résumé

La tuberculose (TB) hépatique est une affection rare et de diagnostic difficile chez le sujet immunocompétent sans histoire de TB pulmonaire. Nous rapportons l'observation d'un patient ayant une TB hépatique dans sa forme pseudotumorale traitée médicalement. Il s'agit d'un homme de 21 ans présentant depuis 10 mois des douleurs abdominales, une perte pondérale, une perturbation du bilan hépatique et un syndrome inflammatoire. Le scanner a montré 2 lésions hépatiques hypodenses hétérogènes de 8 cm et 7 cm, dont la biopsie scanno-guidée n'était pas contributive. Le patient était perdu de vue et réadmis après 6 mois, pour la même symptomatologie avec apparition d'adénopathies cervicales. La biopsie ganglionnaire avait montré une inflammation granulomateuse évoquant une TB. Après un traitement antituberculeux, l'imagerie de contrôle avait montré une régression des lésions. Cette observation illustre la difficulté diagnostique de la TB hépatique isolée et la place du traitement médical.

Mots clés : Pseudo-tumorale ; Tuberculose ; Foie ; Traitement antituberculeux.

ملخص

السل الكبدي هو تشخيص نادر وصعب لدى المرضى الذين يعانون من نقص المناعة في ضل عدم وجود سوابق السل الرئوي لدى المريض. نقدم تقريرًا عن ملاحظة مريض مصاب بمرض السل الكبدي في شكله ورما كاذبا وقع علاجه طبيا. هو رجل يبلغ من العمر 21 عامًا يعاني من آلام في البطن وفقدان الوزن واضطراب وظائف الكبد ومتلازمة الالتهاب الكبدية البيولوجية خلال فترة العشرة أشهر الأخيرة. أظهر التصوير المقطعي وجود إصابات كبديّة غير متجانسة يبلغ طولها 8 سم و 7 سم ، ولم تكن الخزعة الممسوحة بالماسح الضوئي مقررة لها. بعد فقد المريض من المتابعة وقع استعادته بعد 6 أشهر، لظهور نفس الأعراض مع ظهور اعتلال العقد اللمفوية بمستوى العنق. وأظهرت خزعة العقدة اللمفوية التهاب حبيبي يوحي بمرض السل. بعد العلاج بمضادات السل ، أظهر التصوير، بعد العلاج، السيطرة على المرض و انتكاس الآفات. توضح هذه الملاحظة الصعوبة التشخيصية لمرض السل المعزول بمستوى الكبد ومكانة العلاج الطبي في مثل هته الحالات.

الكلمات المفاتيح: تورم كاذب ; السل ; الكبد ; علاج مرض السل.

INTRODUCTION

Pseudo-tumors forms of the liver tuberculosis (TB) are rare with fewer than 100 cases reported in the literature, most commonly as a presentation of a case report [1, 2]. Most reported hepatic involvements are secondary and associated with miliary TB [3]. The diagnosis of hepatic TB is usually difficult, even in endemic areas, in an immunocompetent individual with no evidence of TB in the lung. Its diagnosis is challenging and, most often, it is proposed on the basis of histological analysis. Because of the high mortality risk of hepatic TB, in particular, it is important to recognize the most unusual presentations of this disease. Therapeutic approach of hepatic TB is most often medical with or without surgical or radiological drainage. However, the therapeutic difficulties should be noted.

In this report, we describe a case of pseudo-tumoral form of hepatic TB with no evidence of infection in the lung and illustrate how these cases can be managed medically.

CASE REPORT

We report a 21 year old man with no previous history of tuberculosis (TB) or contact with any patient with TB, presented with 10-months history of upper abdominal pain and weight loss, without jaundice or fever. Besides, he claims that he doesn't smoke or drink.

Clinical examination revealed right upper quadrant tenderness, hepatomegaly with a body mass index of 14. There was no lymphadenopathy, splenomegaly, ascites or any other palpable mass in his abdomen. Respiratory system examination revealed no abnormality.

Initial blood results revealed a microcytic anemia (Hb 11 g/dL, MCV 76 fl), raised inflammatory markers (ESR 100) without raised white cell count, and an elevated alkaline phosphatase (346 IU/L) with normal hepatic transaminases and bilirubins.

Serum tumor markers (alpha-fetoprotein, carcinoembryonic antigen, and CA 19-9) and for hydatic cyst were negative. The tuberculin intradermal reaction test and serological tests for HIV, hepatitis B and C viruses were negative. Chest X-ray showed no lesion suggestive of TB. The transabdominal ultrasound and a subsequent abdominal computed tomography (CT) scan revealed a mixed heterogeneous attenuation lesions in segments 7 and 8 of the right hepatic lobe, measuring 8,3 x 4,3 cm and 7,3 x 5,4 cm, respectively (fig 1). Multiple sub-1-cm lymph nodes were also found surrounding the small bowel mesentery. All other abdominal viscera seemed to be normal with no ascitis.

A guided liver biopsy (Fine-needle aspiration) of the lesion gave inconclusive results. Gram staining of the aspiration fluid and Ziehl-Neelsen staining for acid-fast bacteria were negative. Similarly, routine bacteriological and fungus culture showed the same results.

After a period of 6-month, the patient was readmitted with cervical lymph nodes. Radiological reevaluation shows the same lesions. Subsequent lymph node biopsy was performed and histological analysis revealed granulomatous inflammation associated with Langhans giant cells suggesting tuberculosis (Fig 2). The culture in Lowenstein-Jensen medium using the biopsy specimen revealed *Mycobacterium tuberculosis* and confirmed the diagnosis of TB.

A 2 month-quadruple drugs therapy was launched (Isoniazid, Rifampicin, Ethambutol, and Pyrazinamide) followed by a bitherapy. Within 4 months of therapy, the patient was asymptomatic with normal serum inflammatory markers. Repeat CT scan following 9 months of antituberculous therapy revealed a regression of the lesion (Fig 3).

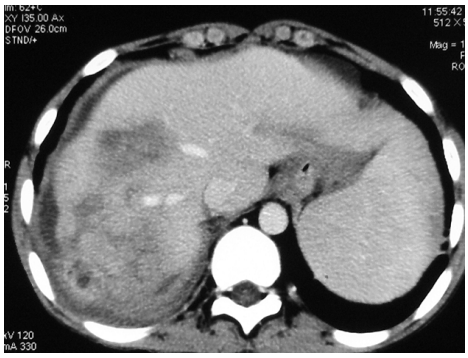

Fig 1: Abdominal computed tomography (CT): mixed attenuation lesions measuring 8 and 7cm respectively occupying the right lobe of the liver

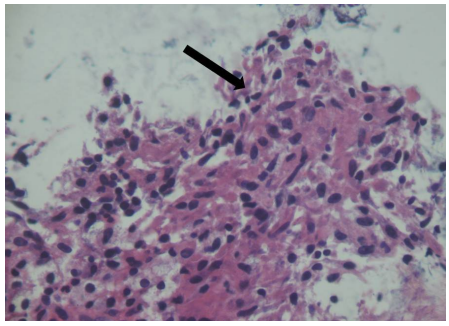

Fig 2 : Lymph node biopsy : Granulomatous inflammation associated with multinucleated giant cell Langhans.

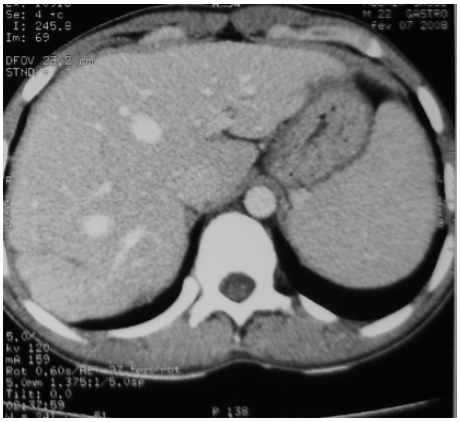

Fig 3: The control CT scan revealed a regression of the lesion.

DISCUSSION

Hepatic tuberculosis is usually associated with active pulmonary TB or miliary tuberculosis, mainly through hematogenous dissemination [3]. Hepatic involvement can be seen in up to 80% of disseminated cases of TB. Isolated liver involvement of a mass or tuberculoma is considered to be rare because of the low oxygen tension within the liver, making it unfavorable for mycobacterial growth. In the current case, our patient revealed no evidence of TB elsewhere, especially in the lung. Primary hepatic TB, in the absence of immunocompromised state, is extremely rare. This diagnosis is most often unrecognized and confused with primary or secondary liver tumor. Final diagnosis, except for germ-proven cases, is made in conjunction with clinical, biological, radiological, and even therapeutic arguments.

The clinical manifestation of hepatic TB takes several forms and can vary from the absence of symptoms to a picture of severe hepatitis with jaundice and hepatic insufficiency [4]. Generally speaking, the most common noted symptoms are right upper quadrant abdominal pain, fever, night sweats, anorexia, and weight loss. The most frequent examination findings include abdominal tenderness with or without a palpable mass, hepatomegaly and occasional jaundice [5]. Laboratory investigations often revealed an elevated alkaline phosphatase in the presence of normal alanine transaminase and aspartate transaminase [3, 5]. Less specific findings include anemia, hypoalbuminemia, and hyponatremia [3].

Imaging studies can represent a diagnostic challenge, with a number of potential differential diagnoses, including primary or secondary liver tumor, inspite of expanding imaging modalities.

The descriptions of hepatic TB in imaging are few in number and most often are sonographic and/or CT descriptions. In ultrasound, hypoechoic nodules are usually noticed, but hyper-echogenic nodules have already been described [6, 7]. Computed tomography (CT) findings usually reveal a round hypodense lesion without enhancement or with low levels of peripheral enhancement after iodine injection and, occasionally, areas of focal calcification [6, 8]. As far as our patient is concerned, lesions were heterogeneous with low density. Few MRI observations of Hepatic TB have been reported in the literature [8-10]. The most frequent image is the one showing hypo-intensity on the T1-weighted sequence and isointensity or hypo-intensity on the T2-weighted sequence. After IV injection of gadolinium there has been a slight rim enhancement predominating in the portal and later phases [6, 10].

Noninvasive diagnosis is therefore difficult. A guided biopsy of the lesion may avoid laparotomy, which is reserved for cases with unsuccessful or impossible percutaneous aspiration. The histologic and bacteriological findings often achieve the diagnosis, with features of caseating granulomatous necrosis. Langhans-type giant cells are often presented with a mixed inflammatory infiltrate including plasma cells, eosinophils, and lymphohistiocytic cells. Low sensitivity of both acid-fast staining (from 0% to 45%) and culture (from 10% to 60%) on demonstrating resistant acid-fast bacilli, imply that diagnosis can still be difficult [11]. However, the use of polymerase chain reaction to directly detect the presence of *Mycobacterium tuberculosis* is increasing and may improve sensitivity rates [12]. Nevertheless, even the absence of acid-fast bacilli should not detract from diagnosis, especially in a high TB prevalence country such as ours. Nevertheless, for most authors [8, 9, 13], the diagnosis can be reached, either based on the presence of hepatic granulomas associated with documented TB in another organ, particularly the lungs, or when the clinical symptoms and radiological examinations regress after starting up anti-tuberculous treatment, and in particular when the initial antibiotic therapy failed [12].

Quadruple therapy with anti-tubercular drugs is recommended for a period of 12 to 18 months [5, 14], though there would often be signs of clinical improvement within 2-3 months. The use of percutaneous drainage combined with transcatheter infusion of anti-tubercular drugs has also been

advocated especially in abscess form of hepatic TB [15].

In conclusion, Isolated Hepatic TB is rare, but with the increasing worldwide incidence of TB, it is a diagnosis that must be considered, especially in patients at high risk with atypical signs and symptoms coming from areas where tuberculosis is endemic. This report illustrates the difficulty to reach a correct diagnosis of hepatic tuberculosis in patient without immunodeficiency. It is usually unsuspected and confused with primary or metastatic carcinoma of the liver. A greater awareness of this clinical entity is required and highly recommended for successful medical treatment.

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