

Chest wall abscess: an atypical presentation of isolated tuberculous liver abscess

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Abstract. The incidence of hepatic tuberculosis is increasing with the resurgence of tuberculosis due to the emergence of multi drug resistant strains and to an increased prevalence of human immune-deficiency virus infection. In contrast, isolated tuberculous liver abscess (TLA) is extremely uncommon with a prevalence of 0.34% in patients with hepatic tuberculosis. We describe a case of isolated TLA in a 32-year-old immune-competent man, who presented with a painless lump in the right posterior chest wall. Fine needle aspiration revealed acid fast bacilli (AFB), computed tomogram of the thorax showed a hepatic abscess in the segments 6 and 7 communicating with the posterior chest wall. The presentation of TLA may be atypical and diagnosis remains elusive unless hepatic involvement is revealed by imaging and AFB is demonstrated in the aspirated pus or necrotic material. Open drainage of the superficial component of the abscess along with anti-tuberculosis treatment resulted in the resolution of the abscess. (www.actabiomedica.it)

Key words: Liver abscess, tuberculosis, computed tomogram

Introduction

Tuberculosis remains a major global health problem infecting one third of the global population. The incidence of hepatic tuberculosis is increasing with the recent resurgence of tuberculosis due to the emergence of multi drug resistant strains and to an increased prevalence of human immune-deficiency virus (HIV) infection. In contrast, isolated tuberculous liver abscess (TLA) is extremely uncommon with a prevalence of 0.34% in patients with hepatic tuberculosis (1). The atypical clinical presentation of this rare entity in the form of a swelling in the chest wall prompted us to present this case, emphasizing the diagnostic problem.

Case report

A 32-year-old man, presented with a painless lump for 3 months, on the right side of posterior

chest wall. He had low grade fever, but no cough/ expectorations, anorexia, jaundice, or weight loss. Chest examination revealed a non tender, firm, non fluctuant lump of 10x6 cm on the posterior chest wall just below the inferior border of the right scapula. His abdomen was not tender on palpation and the liver and spleen were not palpable. There was no intercostal tenderness overlying the liver. Chest X-ray showed elevated right dome of the diaphragm with clear lung fields. Hemoglobin was 13.4 mg/dl, total leukocyte count was 7320/cu mm with 65% neutrophils, and 32% lymphocytes. Liver function tests were normal. Serology for HIV antibodies was non reactive. Fine needle aspiration (FNA) of the lump revealed pus and acid fast bacilli (AFB) was demonstrated on smear examination. A provisional diagnosis of a cold tuberculous abscess was made and anti-tuberculosis treatment (ATT) - four drugs (Isoniazid, Ethambutol, Rifampicin and Pyrazinamide) for 2 months followed by two drugs (Isoniazid and Rifampicin) for 4

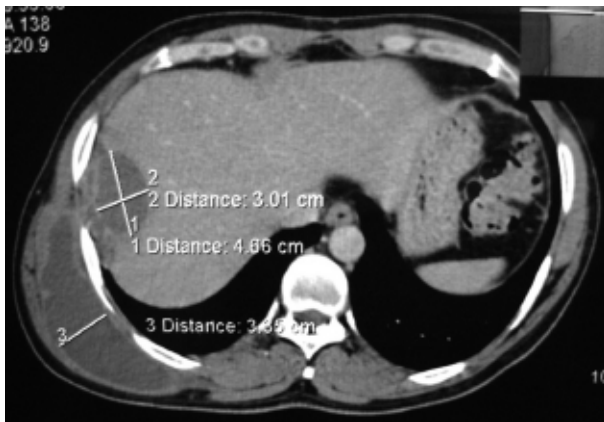


Figure 1. Contrast enhanced CT of the thorax showing a solitary right lobe liver abscess tracking into the inter muscular plane in the posterior chest wall

months - was prescribed. Contrast enhanced computed tomogram (CT) scan of thorax revealed a non enhancing cystic abscess of 8.0x4.5x3.0 cm in the segment 6 and 7 of the liver communicating with the chest wall, while the adjoining rib and lung sections were normal with minimal pleural thickening (Fig. 1). Aspiration of the cold abscess was performed under ultrasound guidance but only a small amount of thick pus was aspirated. Open surgical drainage of the chest wall abscess with drainage of around 100 ml of thick pus and debridement of the unhealthy granulation was performed. The incision was closed over a suction drain, which was removed after 72 hours. ATT was continued post operatively for a total period of 6 months. At last follow up 15 months after surgery, the patient was asymptomatic and ultrasound revealed complete resolution of the abscess cavity in the right lobe of liver.

Discussion

Though the majority of the liver abscesses encountered in the tropics are amoebic in origin, TLA should be considered in patients with a history of tuberculosis, HIV infection, or in liver abscess with a protracted course or complications despite adequate therapy (2). Isolated TLA in an immune competent subject without active pulmonary or miliary tubercu-

losis, or other clinical evidence of tuberculosis is very uncommon (3). High fever, weight loss, right hypochondrium pain and hepatomegaly are the usual clinical findings (4) but at times the presentation is quite atypical such as in this patient, whose only complaint was a swelling on his posterior chest wall. The diagnosis remains elusive in most cases unless AFB is demonstrated in the aspirated pus or necrotic material.

In patients with chest wall swellings, microscopic diagnosis is important in discovering tuberculous vs. pyogenic etiology as well as in excluding soft tissue extension of a neoplastic process. Though the finding of AFB in a tuberculous abscess of the chest wall is rare (5), FNA revealed AFB in this patient. In our experience a chest wall abscess is a common presentation of chest wall tuberculosis with associated rib osteomyelitis (5) and empyema necessitatis. Hence, CT of the thorax was requested to assess the underlying ribs as well as the lung parenchyma.

Anti tuberculosis drugs alone or in combination with percutaneous aspiration under ultrasound or CT guidance is the preferred therapeutic option in TLA with an excellent prognosis (6). Failure of percutaneous aspiration to evacuate pus in this patient was the indication for open surgical drainage from the large, superficial component of the abscess under ATT cover.

TLA although rare, should be considered in the differential diagnosis of a mass in the right hypochondrium and right lower chest wall especially in areas where tuberculosis is prevalent, and FNA and CT are essential investigations that facilitate a definite diagnosis.

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