

one the initial treatment was with methotrexate with worsening of the hepatic function, therefore the patient ultimately received a liver transplant. In the second case, treatment was begun with ursodeoxycholic acid with poor evolution at the pulmonary level. Methotrexate and hydroxychloroquine were therefore added for its control. Finally, in the last case, single treatment was initiated with corticosteroids with poor hepatic evolution, requiring transplantation. The clinical case that we present has been treated with corticosteroids and ursodeoxycholic acid with good control of the disease to date.

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Usefulness of the Presence of Trophozoites in Pleural Fluid in the Diagnosis of Amoebic Empyema and Liver Abscess

Utilidad de la visualización de trofozoitos en líquido pleural en el diagnóstico de empiema y absceso hepático amebianos

To the Editor:

Entamoeba histolytica (*E. histolytica*) is an uncommon cause of liver abscess, affecting immigrants or travellers to endemic areas,¹ although indigenous cases have been reported in our country.² The exact incidence of pulmonary alterations in patients with hepatic amebiasis is unknown, although it has been estimated that there can be clinical or radiological pulmonary findings in 50% of the cases. One-third of said alterations include inflammatory reactions (pleural effusion and pneumonitis), and there is frequently rupture of the abscess to the airway, pleural cavity or both.³

We present the case of a patient with liver abscess and right pleural effusion. The identification of *E. histolytica* in the pleural liquid allowed us to make a diagnosis of amoebic empyema and amoebic liver abscess, even though the microbiological study of the pus drained from the abscess had come back negative for bacteria and parasites.⁴

The patient is a 57-year-old man who is a professional bullfighter and travels to Ecuador annually. He arrived at the ER due to symptoms evolving over the previous three weeks of fever (39 °C) with shivering. These symptoms began while in Ecuador after having been there for two weeks, and a fortnight before his return to Spain. In recent days, the fever was accompanied by dry cough and pain on the right side and ipsilateral hypochondrium. Physical exploration showed an axillary temperature of 37.5 °C, hypoventilation in the right lung base and painful hepatomegaly at one fingerbreadth. Hemogram: 14.350 leukocytes/mm³ (72.3% neutrophils), hemoglobin 10.8 g/dl with normal MCV and MCH and 599,000 platelets/mm³. Biochemistry: urea 28 mg/dl, creatinine 0.79 mg/dl, total protein 6 g/dl, GOT 36 IU/l, GPT 78 IU/l, alkaline phosphatase 283 IU/l, GGT 278 IU/l, total bilirubin 0.84 mg/dl, LDH 129 IU/l, VSG 110 mm/h and CRP 147 mg/l. Chest radiograph showed evidence of elevation of the right hemidiaphragm with ipsilateral pleural effusion in limited quantity. The abdominal ultrasound showed a liver abscess of 9.5 × 9 cm in the posterior segments of the right hepatic lobe. A percutaneous drain was placed and maintained for 11 days, while antibiotic therapy was initiated with

con piperacillin/tazobactam at a dose of 4/0.5 g IV/8 h. The culture of the pus and the analysis for parasites were negative. In successive days, the patient was afebrile, although the non-productive cough and general malaise continued. Treatment with metronidazole IV 750 mg/8 h was added due to the suspicion of amoebic abscess. Diagnostic thoracentesis revealed pleural liquid that was melicerous in appearance with 7,200 cel/mm³ (PMN 75%), protein 4.91 g/dl, LDH 615 mU/ml, glucose 0.95 g/l, pH 7.31, ADA 27.5 mU/ml, and presence of trophozoites of *E. histolytica*. Indirect immunofluorescence for *E. histolytica* was positive at 1/512. A pleural drain tube was placed and removed four days later. The patient's symptoms remitted. Oral treatment was continued at 750 mg/8 h for two weeks, followed by paromomycin 30 mg/kg/day for 10 days. On the follow-up CT done two weeks later, persistence of the residual cavity was observed in the right hepatic lobe (3 x 2.8 cm in diameter), with no evidence of pleural effusion.

The previously described case suggests that when given a liver abscess with associated pleural effusion in which the patient history show suspicions for amoebic etiology, both diagnostic thoracentesis and the investigation of trophozoites in the pleural liquid can be useful, especially if the culture and the investigation for parasites in the pus of the liver abscess are negative.⁴ This would be of special interest if the clinical evolution was unfavorable with antimicrobial treatment and percutaneous drain of the liver abscess⁵ since, as happened in our patient, a correct diagnosis allowed for continued treatment with metronidazole, already initiated empirically,^{1,3} and the placement of a pleural drain tube, as is recommended for the treatment of amoebic empyema.⁴

Although the most frequent access pathway to the pleural space of *E. histolytica* is the transdiaphragmatic rupture of an amoebic liver abscess, the trophozoites can also reach the pleural space through the blood or lymphatic flow.⁶ Therefore, imaging tests, as happened in our case, may not show signs of diaphragmatic perforation.

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Endobronchial Ultrasound in the Diagnosis of Lung Cancer

Aportación de la ecobroncoscopia al diagnóstico del cáncer de pulmón

To the Editor:

We have read with interest the article by Sanz-Santos et al,¹ entitled "Usefulness of a Lung Cancer Rapid Diagnosis Specialist Clinic. Contribution of Ultrasound Bronchoscopy", published in *Archivos de Bronconeumología*. It comments on the role of endobronchial ultrasound in the diagnosis of lung cancer, which is the technique used for confirmation in 20% of cases.

In patients with suspicion for lung cancer, confirmation of the diagnosis is usually obtained by conventional bronchoscopy or transthoracic fine-needle aspiration. However, a variable percentage of patients remain undiagnosed after these explorations and require either repetition of the same procedures or the use of other more invasive procedures, such as mediastinoscopy.² Endobronchial ultrasound, which has been shown to be highly efficient in staging mediastinal lesions,³ has recently been recommended for the diagnosis of lung cancer when other methods have failed.⁴ In addition, it has been proposed as the initial technique due to its capacity for obtaining material for diagnosis and staging, which would allow the patients to benefit from a single procedure directed at both objects that would make other procedures unnecessary.⁵

Recently, we have analyzed the lung cancer cases diagnosed in our department by means of endobronchial ultrasound (EBUS).⁶ EBUS was performed with a BF-UC160F model (Olympus, Tokyo, Japan). The pathologist was not physically present, and up to three aspirations were taken from each lesion. In the 45 patients whose pathological diagnosis was confirmed with this technique, we sampled 12 lung lesions with a mean size of 3.3 cm (SD 0.6) and 71 mediastinal, hilar or interlobar lymphadenopathies with a mean size of 1.9 cm (SD 0.9). The majority were non-microcytic carcinomas (86.7%) with a lower percentage (13.3%) of microcytic carcinomas.

The characteristics of the cases in which EBUS was the only technique for confirmation were variable, but they had in common the presence of lung or mediastinal lesions adjacent to the trachea and central bronchi, where conventional bronchoscopy was not able to make the diagnosis. It should be noted that 7 adenopathies with a size of less than 1 cm were malignant, a circumstance that takes on special relevance when these small lesions are the only ones that are accessible.

The role of endobronchial ultrasound in the diagnostic algorithm of lung cancer has still yet to be established. However, the results of studies such as the one by Sanz-Santos et al and our own data indicate that it may occupy a relevant position, not only in the staging but also in the diagnostic confirmation of lung cancer.

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