Right Middle Lobe Abscess Due to Endamoeba Histolytica*

Report of Two Cases

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Amebic liver abscess may frequently be complicated by consolidation and abscess formation in the right lower lobe, empyema and hepato-bronchial fistula. The incidence of pleuropulmonary involvement in a collected series of 2490 cases of amebic liver reported by Ochsner and De Bakey1 was 15.8 per cent. Cases of hematogenous spread to the upper lobe are also recorded.2,3 Amebic involvement of the right middle lobe, however, appears to be rare. Of 153 cases of pleuropulmonary amebiasis reported by Ochsner and De Bakey,4 there were no examples of middle lobe pathology. In view of the infrequency of this condition and the diagnostic and therapeutic problems which may arise through lack of awareness of this entity, two cases are reported here.

Case 1

A 30-year-old African was admitted with a history of right chest pain and cough of three months' duration. The pain was aggravated by respiration and the cough was productive of blood stained sputum. He was well nourished, afebrile and in no distress. There were signs of consolidation of the right middle lobe. The liver edge was non-tender and palpable just below the costal margin. Radiography of the chest confirmed the presence of right middle lobe consolidation. Laboratory investigations showed hemoglobin of 13 gm. per cent and white cell count of 11,800 of which 77 per cent were neutrophiles. Repeated examinations of the sputa for malignant cells and tubercle bacilli were negative.

He was treated with penicillin and streptomycin, but the hemoptysis persisted in severity and he developed intermittent pyrexia. Bronchoscopy was performed eight days after admission and a small amount of pus was found exuding from the middle lobe bronchus; the rest of the bronchial tree was normal. Bronchography showed consolidation of the middle lobe and its lateral segment did not fill (Fig. 1). There was no evidence of bronchiectasis.

In view of the persistent hemoptysis, thoracotomy was performed. The right middle lobe was found to be solid and adherent to the chest wall and the diaphragm. The lobe was removed and a perforation was found in the diaphragm which communicated with a small liver abscess. The diaphragm was repaired and the liver abscess drained. Postoperatively the patient was treated with emetine hydrochloride, chloroquine, diodoquinolinol (Diodoquine) and tetracycline. His postoperative course was uneventful and a follow up radiograph two months after operation showed the lung to be fully expanded. Macroscopically the middle lobe was solid and unoperated and its pleura was thickened. A small fistula was present on the diaphragmatic surface and communicated with an abscess cavity 2 x 1 x 1 cm. in the middle lobe. Microscopy (Fig. 2) showed an acute abscess with surrounding fibrosis and the presence of numerous forms of E. histolytica.

Case 2

A 31-year-old African woman was admitted for the investigation of hemoptysis. This had

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been present for one month and was associated with severe pain in the right lower chest which was made worse by respiration and by coughing. There had been no improvement after a seven-day course of penicillin administered by her private physician.

The essential physical findings were confined to the chest where there was consolidation in the right middle lobe. The sputum was negative for tubercle bacilli on three occasions and the blood count, stool and urine examinations were non-contributory. Because of the experience with the first case, the sputum was examined on several occasions for the presence of ameba, but these were never found. Bronchoscopy revealed redness and edema of the intermediate and right lower lobe bronchi. Pneumoperitoneum showed adhesion of the upper surface of the liver to the anterior part of the diaphragm (Figs. 4 and 5) and an abscess in the right middle lobe directly above this area.

She was then treated with emetine hydrochloride, chloroquine and tetracycline with immediate clinical response and cessation of the hemoptysis. A chest radiograph three months after this revealed some fibrosis in the middle lobe with closure of the cavity.

**Discussion**

Despite a fairly high incidence of pulmonary complications in cases of hepatic amebiasis, right middle lobe involvement by direct extension is rare due to the fact that the liver and the diaphragm come into contact mainly with the right lower lobe. Only a small portion of the diaphragm is related to the right middle lobe. Perforation of the diaphragm by an abscess is therefore much more likely to involve the lower lobe.
Clinically, differentiation between a pyogenic and an amebic abscess of the middle lobe may be difficult or impossible. Both cases reported here presented with hemoptysis; neither had coughed the typical anchovy-sauce pus or bile-stained sputum. Similarly, hepatomegaly and tenderness in the right hypochondrium, as well as elevation of the right leaf of the diaphragm radiologically, which are features commonly found in amebic liver abscess, were all conspicuous by their absence. Because of these difficulties in establishing a diagnosis, we feel that pneumoperitoneum as a diagnostic procedure offers the best prospect of success by clearly delineating the position of the diaphragm and demonstrating any area of adhesion between it and the upper surface of the liver.

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REFERENCES


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PULMONARY EMBOLISM

Surgical therapy now actually affords hope for some patients with pulmonary embolism. With advances in cardiovascular surgery, the operation of pulmonary embolectomy is being performed more frequently and successfully, at least five such cases being reported in the past two years.

The fact that approximately 30 per cent of patients may survive a massive pulmonary embolus for two hours or longer lends support to the belief that planned surgical intervention with the aid of extracorporeal circulation not only is feasible, but could be successful in a fair proportion of these patients. A successful pulmonary embolectomy is described.