Amoebic psoas and liver abscesses

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Summary: A 28 year old woman with a history of a dysenteric illness and documented *Campylobacter* infection presented with amoebic psoas and liver abscesses. A review of the literature of the last 20 years did not yield any reports of an amoebic psoas abscess.

Introduction

Entamoeba histolytica causes a spectrum of clinical disorders. Extra-intestinal amoebiasis often presents as liver abscesses, although brain, lung, skin and genital lesions are well recognized.^{1,2} Amoebic psoas abscess is an unusual complication and has not been reported in the last 20 years.²

Case report

A 28 year old woman was admitted with a 4 day history of right upper quadrant abdominal pain associated with fever, rigors, diarrhoea and headache. Four months earlier she had returned from a month's holiday in Nepal with a diarrhoeal illness. Stool samples taken at the time grew *Campylobacter jejuni*; no ova, cysts or parasites were demonstrated. She was treated by her general practitioner with a one week course of oral erythromycin. Three weeks later she had a recurrence of her symptoms and was prescribed a further course of erythromycin; repeat stool cultures were negative. She subsequently suffered intermittent diarrhoea with occasional mucus until admission.

On examination she was pyrexial at 39°C. She had an enlarged, tender liver, four centimeters beneath the costal margin and was also tender in the right loin. She held the right hip in a partially flexed position because extension was painful.

Initial investigations showed a leucocytosis with a neutrophilia of $15.5 \times 10^9/l$ and an erythrocyte sedimentation rate of 128 mm/hour. Liver function tests were normal apart from a raised gamma glutamyl transferase of 65 U/l. Blood and urine cultures, hepatitis A and B serology, and blood for

malarial parasites were negative. An abdominal ultrasound examination showed an 8 × 5 cm collection in the inferolateral part of the right lobe of the liver together with a collection in the right psoas muscle (Figure 1). Sigmoidoscopy was normal. Stool culture, rectal biopsy and liver abscess aspirate were negative for amoebae and other pathogens. The amoebic fluorescent antibody test was positive at a titre of 1:160 confirming the diagnosis of invasive amoebiasis.

She was treated with metronidazole for a total of 14 days; initially 500 mg 8-hourly intravenously which was changed after 3 days to 800 mg 8-hourly orally. A total of 100 ml of 'pus' was aspirated from the liver abscess by fine needle under ultrasound guidance on the day of admission and a further aspiration was performed 8 days later. Her temperature settled within 2 days of admission and she was discharged on day 10.

Serial ultrasound examinations showed complete resolution of both the psoas and the hepatic abscesses 6 weeks after admission. Convalescent amoebic fluorescent antibody testing was negative at 6 months.

Discussion

The incidence of psoas abscess has declined with the control of tuberculosis, previously the most common cause in Western society. A psoas abscess now most frequently results from primary bowel pathology such as Crohn's disease, diverticulosis and perforation; the pathogenesis may be via direct or haematogenous spread, or complicate suppurative lymphangitis.^{3,4} In the case of amoebic psoas abscess it may be due to either direct spread from the posterior perforation of a caecal ulcer or to haematogenous spread.⁵ In our patient, haemato-

Figure 1 An ultrasound scan showing the abscess in the right psoas muscle.

genous spread appears more likely in view of the lack of evidence for gut involvement on stool culture, sigmoidoscopy and rectal biopsy. The patient was treated with two courses of erythromycin which has a weak direct amoebic lumicidal effect as well as altering gut flora.^{1,6} To detect trophozoites in the stools, samples must be examined immediately; cyst excretion can be intermittent and therefore missed.⁷ Consequently, half the patients with amoebic liver abscess show no evidence of amoebic gut infection.¹

Amoebiasis is generally contracted in areas where sanitation is poor.⁸ A patient returning from such an area with a dysenteric illness should suggest the diagnosis of amoebiasis. More than one organism may be present in the stool. Mixed infection is reported with variable frequency (5–12%) and six enteric pathogens have been isolated from one patient.⁹ Persistent diarrhoea in a patient returning from an endemic area who has had one pathogen isolated and treated should lead one to search closely for other co-existent pathogens. Amoebic disease remains difficult to diagnose and only serology may be positive as in our patient.

Extra-intestinal amoebiasis most frequently (90%) presents as liver abscesses of which 70% affect the right lobe of the liver.^{1,8} To our knowledge amoebic psoas abscess has not been reported in the last 20 years. In general, psoas abscesses are frequently missed on initial presentation and may only be picked up on ultrasound scanning.⁴ Ultrasound scanning remains the best means of diagnosis and of monitoring the response to treatment; the rate of resolution of amoebic liver abscesses has been mathematically correlated to the initial size on ultrasound examination.¹⁰ Computed tomography is helpful but has the drawback of significant radiation exposure, especially if serial scans are required.

Amoebic abscesses are best treated with metronidazole.¹ Patients should receive at least 5 days treatment with 800 mg 8-hourly by mouth. Concurrent administration with diloxanide furoate, 500 mg 8-hourly for 10 days, will eradicate bowel (cyst) carriage.²

References

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