Missed Diagnosis

Focal fatty infiltration of the liver mimicking metastatic disease

Y. Bashir

Cardiac Department, John Radcliffe Hospital, Headington, Oxford OX3 9BU, UK.

Summary: We report the mistaken diagnosis of metastatic liver disease by ultrasonography in a patient with congestive heart failure and focal fatty infiltration of the liver. Multiple echogenic space-occupying lesions in the liver can be caused by benign conditions as well as tumour deposits and in a debilitated patient the possibility of focal fatty infiltration should always be considered.

Introduction

Ultrasound scanning has an established role in the detection of hepatic metastases in patients with known primary tumours. With the widespread use of abdominal ultrasonography for the investigations of upper gastrointestinal symptoms, abdominal pain, hepatomegaly and jaundice, it is not uncommon to identify cases of metastatic liver disease before the primary tumour is known and sometimes the ultrasound scan provides the only definite indication that the patient is suffering from widespread malignancy. Unfortunately, the sonographic appearances of liver metastases can be mimicked by benign lesions and failure to recognize this possibility may result in a mistaken diagnosis of carcinomatosis.

Case report

A previously fit 72 year old woman was admitted under a general surgical team with a three month history of breathlessness, nausea, vomiting and weight loss of approximately 2 stones. Her general practitioner had organized an abdominal ultrasound scan which had been reported as showing 'an enlarged liver containing several echogenic metastases' and so a presumptive diagnosis of disseminated malignancy had been made. There was no history of cardiovascular disease or hypertension.

On examination she appeared cachectic and mildly jaundiced with signs of gross congestive cardiac failure including smooth hepatomegaly but no specific evidence of malignant disease. A chest X-ray showed cardiomegaly with bilateral pleural effusions and pulmonary venous congestion but no other lesion. Her liver function tests were bilirubin 43 µmol/l, aspartate transaminase 71 IU/l (normal 10 - 35) and alkaline phosphatase 655 IU/l (normal 100 - 300) and a repeat abdominal ultrasound scan confirmed that there were multiple round echogenic lesions in the liver (Figure 1). She was commenced on bumetanide 1 mg daily for her cardiac failure and investigations were performed to establish the primary tumour, including abdominal/pelvic ultrasonography, barium studies, mammography and urinary 5-hydroxyindoleacetic acid, all of which were negative. She continued to deteriorate and 10 days after admission she was transferred to a medical firm for 'terminal care'.

The impressive cardiovascular clinical findings were noted again and it was felt that her condition could be entirely explained by heart failure with hepatic congestion and cardiac cachexia. Since the only evidence of malignancy came from the ultrasound scan, this was repeated again but the findings were unchanged from the previous two scans. The patient's therapy was intensified with the introduction of captopril and intravenous diuretic but she died the next day. A post-mortem examination confirmed severe congestive cardiac failure with extensive atherosclerosis of all the coronary arteries but no myocardial infarction. The liver was enlarged and congested with several areas of focal fatty infiltration and a single haemangioma 1.5 cm in diameter but there was no evidence of tumour.

Discussion

The use of ultrasonography for the diagnosis of malignant liver lesions has been extensively studied...
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References


