ISOLATED PORTACAVAL ADENOPATHY IN HODGKIN LYMPHOMA
CT AND US FINDINGS

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We report a case of isolated portacaval adenopathy as the initial presenting feature in a patient with Hodgkin lymphoma. The differential diagnosis of masses located in the portacaval space is discussed and signs useful to localized tumors to this space are described.

KEY WORDS:
Lymphatic system; Lymphoma; Hodgkin disease; Portal vein; Vena cava

INTRODUCTION

Masses arising in portacaval space can originate from any of the normal structures that are found in this space. This includes the papillary process of the caudate lobe, blood vessels such as the branches of the pancreaticoduodenal arcades, the replaced or accessory right hepatic artery, as well as lymph nodes (1, 2). We report a case of isolated portacaval adenopathy due to Hodgkin lymphoma that resembled an exophytic caudate lobe mass.

CASE REPORT

A 58-year-old white woman was admitted for evaluation of iron deficiency anemia that was resistant to therapy. She had a weight loss of about 30 lb and also had a history of night sweats.

Physical examination was normal. An ultrasound (US) examination revealed a large mass originating either in the caudate lobe or the retroperitoneum. Percutaneous skinny needle aspiration biopsies using US guidance yielded atypical lymphocytes, but were nondiagnostic.

The patient underwent an abdominal computed tomography (CT) examination that confirmed the presence of a large homogenous mass which displaced the portal vein anteriorly and the inferior vena cava (IVC) posteriorly, placing the mass in the portacaval space (Figures 1 and 2). Primary consideration was given to an exophytic hepatic mass originating in the papillary process of the caudate lobe. In view of the remote possibility of the mass being of hepatic origin and for the purposes of providing a road map preoperatively, a visceral angiogram was performed. This revealed a hypovascular mass that received no significant vascular supply from the hepatic artery and thus suggested that the mass was likely of extrahepatic origin. A subsequent chest CT was negative.

The patient underwent an exploratory laparotomy at which time a 4 × 4 × 8-cm periduodenal nodal mass was resected. No other lymphadenopathy was present. This was proven on pathological examination to represent mixed cellularity Hodgkin lymphoma. Liver biopsies and bone marrow biopsies performed at the time of surgery were negative. She was staged as stage I-B Hodgkin lymphoma of mixed cellularity type and put on a course of chemotherapy. She has had no relapse of her disease to this date.

DISCUSSION

Normal sized lymph nodes have been demonstrated by CT in the portacaval space and reported initially by Zirinsky et al. (1) and Weinstein et al. (2) in prior reports. Zirinsky and his colleagues have described in some depth the normal structures that are in the portacaval space. These include the papillary process of the liver, replaced or accessory hepatic artery, pan-

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Received July 15, 1992; accepted April 29, 1993.

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655 Avenue of the Americas, New York, NY 10010
0899-7071/94/$7.00

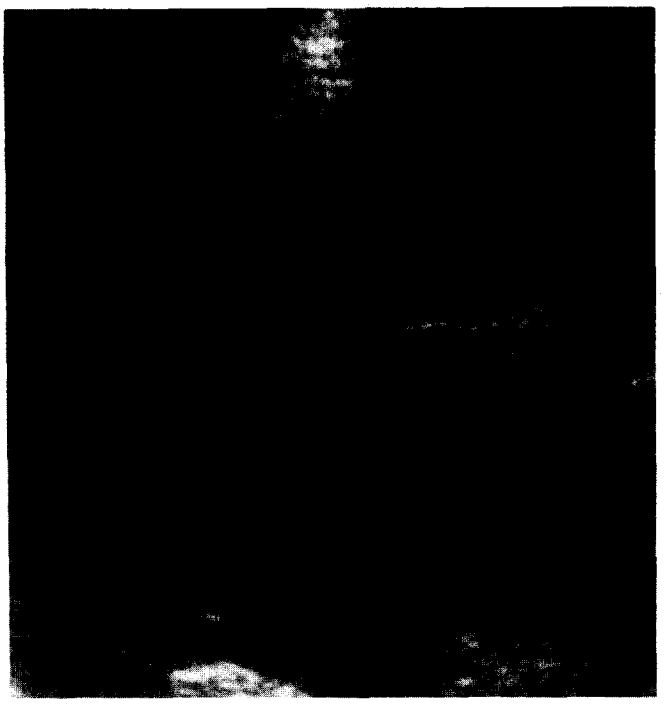

FIGURE 1. Transverse section through the liver demonstrates hypoechoic mass (M) posterior to the gallbladder (GB).

creaticoduodenal arterial branches, lymph nodes, the cystic duct, and the epiploic foramen. The morphology of the normal nodes in this space were unique in that they were oblong or rectangular in shape while the abnormal nodes in addition to being oblong or rectangular had lobulated or irregular contours. The authors concluded that 13 mm was the upper limits in anteroposterior dimension for a normal lymph node at this location. More recently, Dorfman et al. (3) have evaluated the criteria for normal sized nodes in the abdomen and have concluded that using short axis measurements, the upper limits of normal for portacaval nodes was 10 mm.

Abnormal enlarged abdominal nodes have been described in patients with a variety of nonneoplastic disorders (4–6). In particular, enlarged portacaval nodes have been described in chronic active hepatitis and primary biliary cirrhosis (5, 6).

Involvement of abdominal nodes including portacaval nodes can be seen in both Hodgkin and non-Hodgkin lymphoma. However, the portacaval nodal involvement is not usually an isolated finding and is usually seen in association with involvement at multiple additional sites. The sonographic findings of portacaval nodal involvement due to non-Hodgkin lymphoma following orthoptic liver transplantation have been recently reported (7).

Hodgkin lymphoma is classified into four main subgroups histopathologically (8). The most common variant in the United States is the nodular sclerosing type that often presents with a mediastinal mass and is more common in young women. In contrast, the mixed cellularity type is common in men and presents more commonly with peripheral findings such as adenopathy. The spleen and retroperitoneal nodes are commonly involved. The lymphocytic predominance and lymphocytic depletion types are less common and may present as a localized process or may be generalized. The lymphocytic predominance type is usually more indolent, in contrast to the lymphocytic depletion type.

The case discussed above is unique in many respects. The presentation was extremely unusual for Hodgkin lymphoma, as solitary portacaval adenopathy was the single finding at presentation. There was no associated peripheral adenopathy at presentation. In addition, at the time of exploration laparotomy, subsequent pathological evaluation and on follow-up evaluations no additional sites of lymphadenopathy or other sites of visceral involvement were detected. This is unusual for Hodgkin lymphoma as the disease usually involves contiguous lymph node chains and spreads in this fashion.

When masses in the portacaval space are encountered, one has to consider those that may arise from any of the normal structures which are present in this space. Most commonly, this would represent masses involving either the caudate lobe (papillary process) or the portacaval lymph nodes. Less commonly, masses arising from the other normal structures that reside in this space have to be considered. Masses arising in the portacaval space tend to displace the portal vein anteriorly and the IVC posteriorly, as was seen in this case. This sign may be therefore useful to differentiate masses arising in the portacaval space from those arising from structures adjacent to this space.

In conclusion, we have described an unusual presentation for Hodgkin lymphoma in a patient in whom portacaval adenopathy which mimicked an exophytic caudate lobe mass was the solitary presenting feature.

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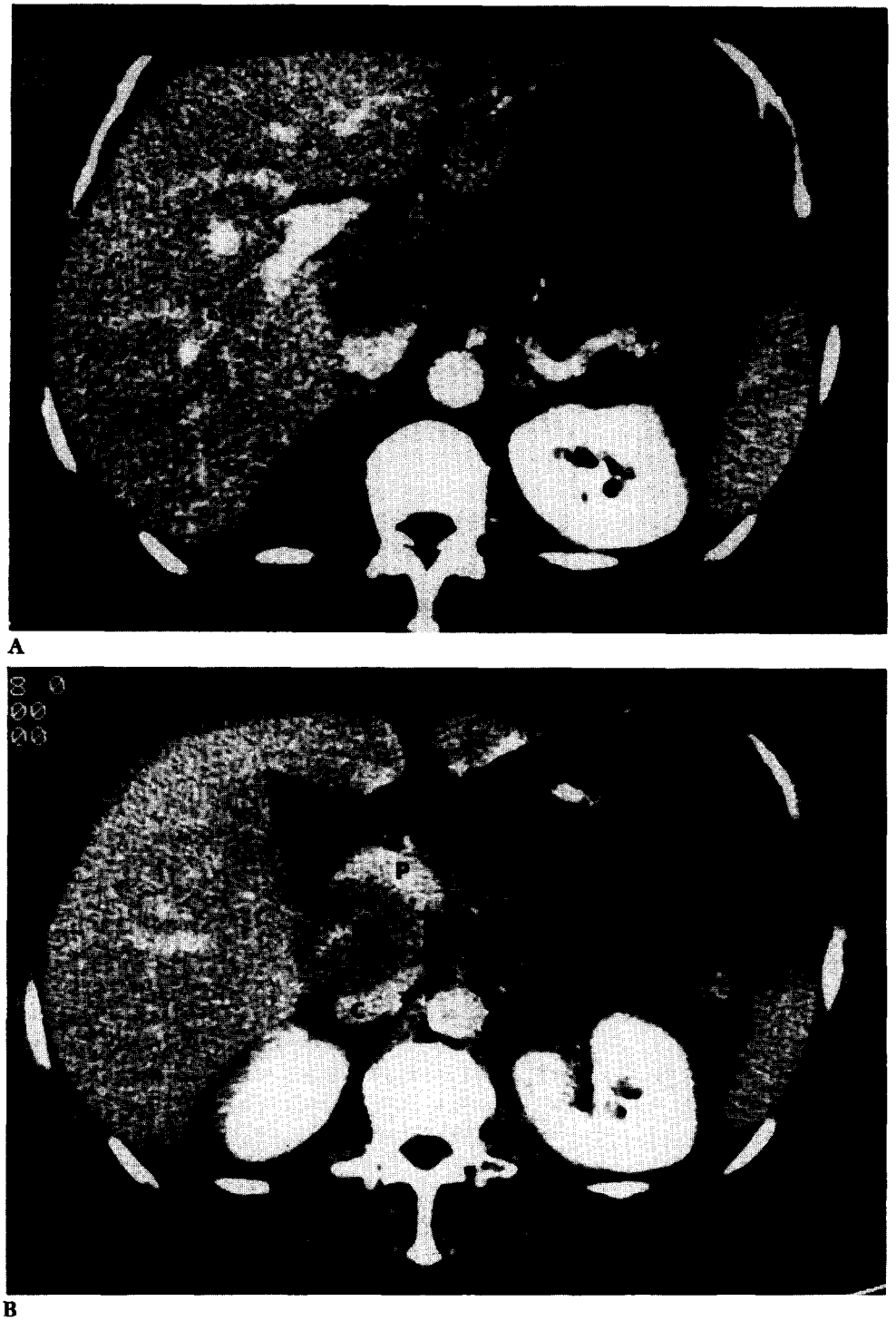

FIGURE 2. Contrast enhanced CT demonstrates mass (M) anterior to IVC (C) and posterior to the main portal vein (P). Note displacement of IVC posteriorly and the portal vein anteriorly.

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