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CASE IMAGE

Nodular hepatic lesion mimicking gallbladder carcinoma in myeloma

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Abstract

An 81-year-old man was diagnosed with nodular hepatic lesion of extramedullary plasmacytoma with the absence of FDG uptake. Doppler ultrasonography showed pulsations and abundant blood flow signals within the tumor. The blood flow was temporally reduced after daratumumab-based induction therapy; however, the tumor rapidly re-expanded with blood reflow.

KEYWORDS

extramedullary plasmacytoma, gallbladder carcinoma, hepatic tumor, multiple myeloma, ultrasonography

Nodular liver infiltration of multiple myeloma is extremely rare[1,2] and hard to diagnose. An 81-year-old man presented with a 3-month history of lumbar pain and discomfort. Abdominal ultrasonography revealed a heterogeneous and predominantly hypoechoic tumor on the hepatic side of the gallbladder (Figure 1A). The innermost hyperechoic layer of the gallbladder lining was intact. Doppler ultrasonography showed pulsations and abundant blood flow signals within the tumor (Figure 1B). On contrast-enhanced computed tomography, the tumor exhibited marked enhancement during the arterial phase that became isodense to the liver during the portal venous phase (Figure 2A,B). Liver biopsy revealed extensive infiltration with sheets of plasma cells stained positive for CD38, IgG, and kappa light chains (Figure 3A–D); therefore, extramedullary multiple myeloma was diagnosed. The percentage of bone marrow plasma cells was 65.2 (Figure 4). Positron emission tomography demonstrated abnormal uptake in the bone marrow, but no metabolic activity was detected in the tumor (Figure 2C). Daratumumab-based induction therapy reduced the tumor size and its blood flow (Figure 1C,D); however, the tumor rapidly re-expanded with irregularly thickening and narrowing of the gallbladder wall and lumen (Figure 1E,F). The patient deteriorated rapidly despite treatment and died 7 months after diagnosis. For gallbladder tumors without fluorodeoxyglucose intake, ultrasonography can be useful for rare differential diagnosis and early detection of extramedullary plasmacytoma.

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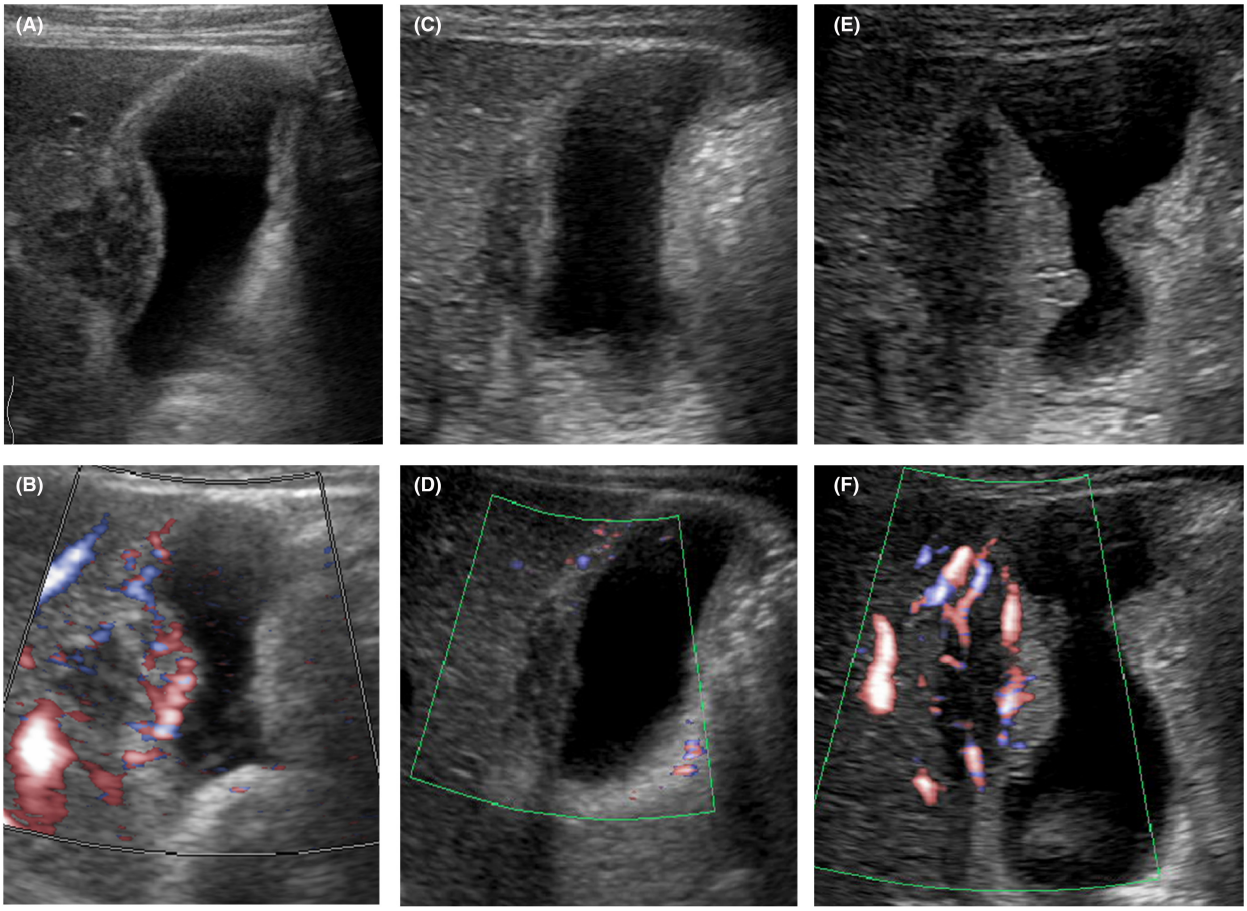

FIGURE 1 Abdominal ultrasonography

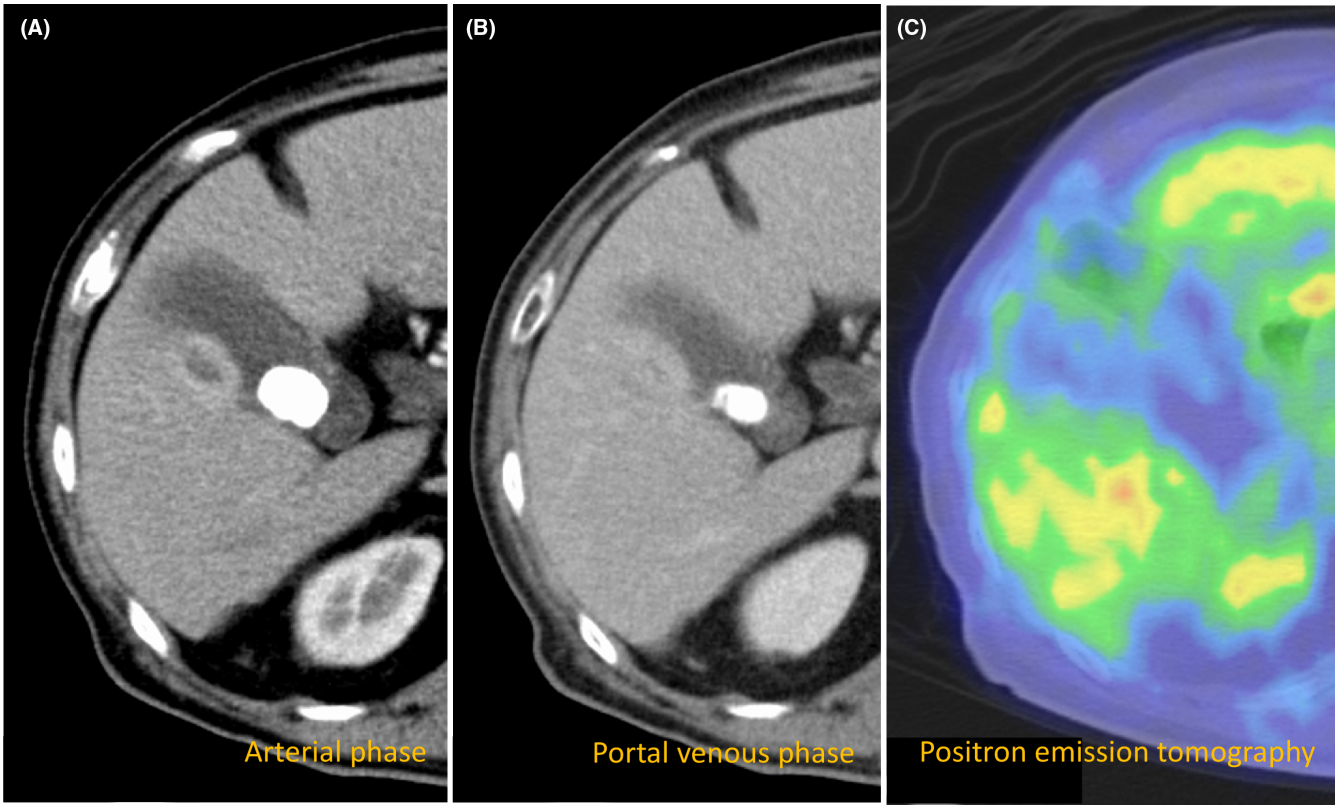

FIGURE 2 Contrast-enhanced computed tomography and positron emission tomography

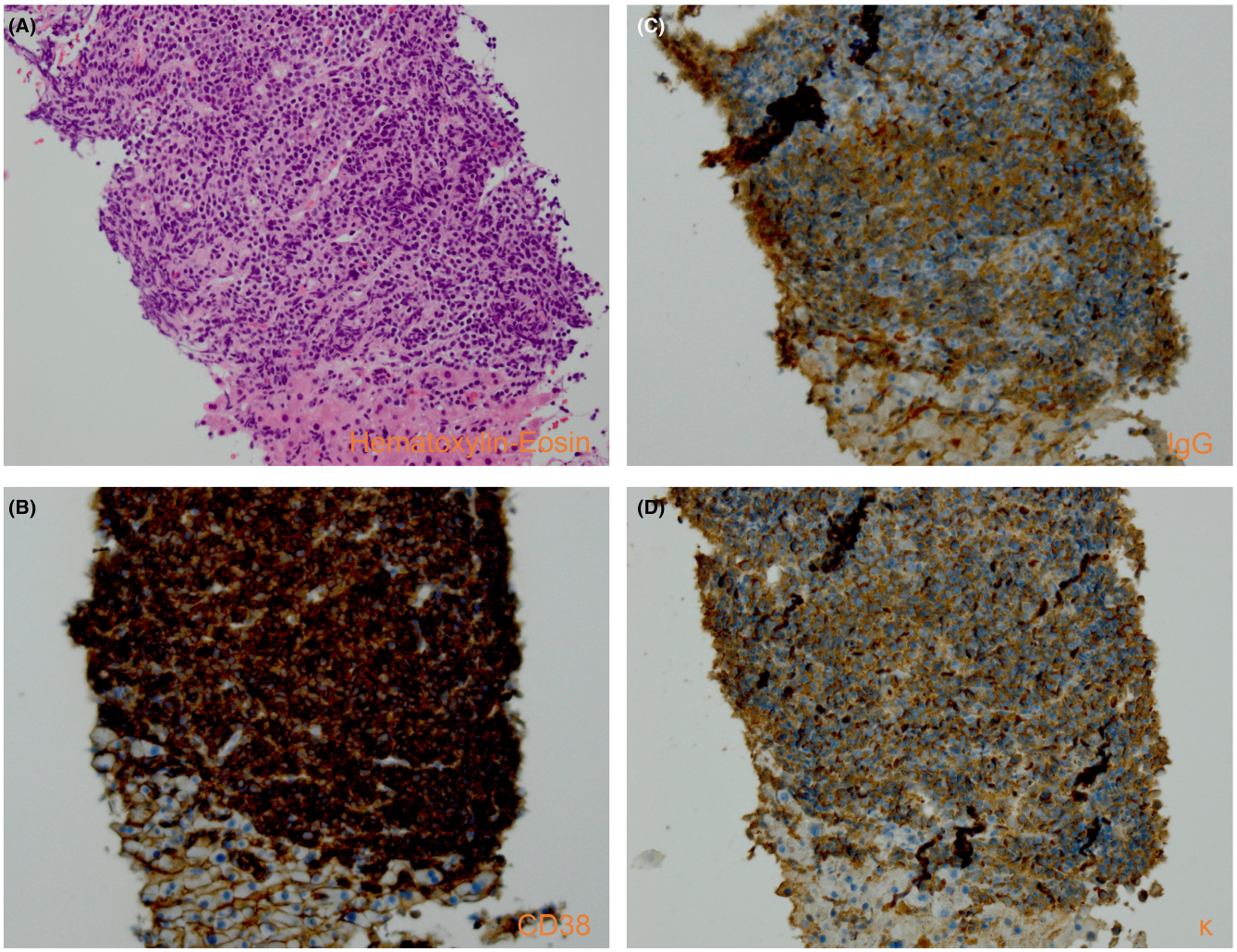

FIGURE 3 Liver biopsy

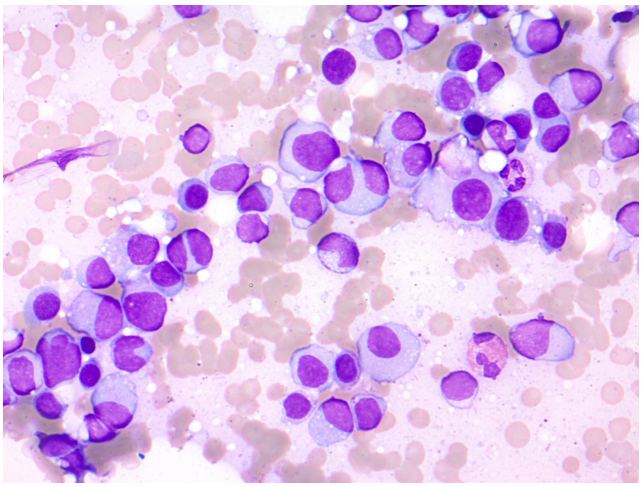

FIGURE 4 Bone marrow smear

AUTHOR CONTRIBUTIONS

KT wrote the manuscript with support from TT. KT and MM contributed to the clinical data collection. All authors discussed the case and approved the final manuscript.

ACKNOWLEDGMENT

None.

CONFLICT OF INTEREST

The authors report no conflicts of interest for publication of this article.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

CONSENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

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