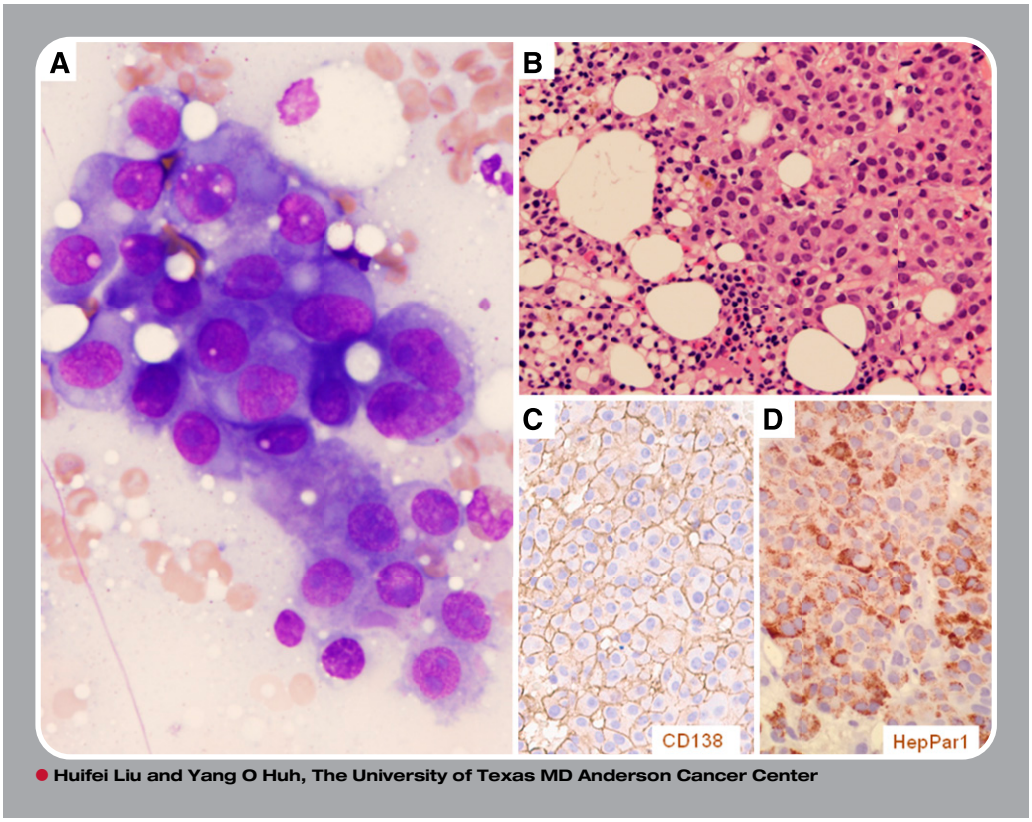
bloodwork
IMAGES IN HEMATOLOGY

A case of multiple myeloma mimics: extensive bone metastasis of hepatocellular carcinoma without liver mass



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An 80-year-old man with back pain, a rib fracture, and multiple bone lytic lesions was diagnosed with multiple myeloma (MM) by bone marrow (BM) biopsy and transferred to our hospital. The BM aspirate showed many clusters of atypical cells resembling immature neoplastic plasma cells (panel A). The BM biopsy showed sheets of tumor cells (panel B). His serum immunoglobulin and free κ/λ ratio were normal. His serum alpha-fetal protein (AFP) was 16 038 ng/mL, and carbohydrate antigen 19-9 level was 207.4 U/mL. Positron emission tomography-computed tomography and ultrasound did not detect any mass in the liver or other abdominal organs. There were multiple bone lytic lesions at the scalp, rib, vertebra, and femur, with soft tissue infiltration and a large paraspinal mass (7.6 × 3.8 cm) at the left L2 level.

By immunohistochemistry, the tumor was positive for pan-cytokeratin (CK), arginase 1, HepPar1, and CD138 (panels C and D) and negative for κ and λ, supporting hepatocellular carcinoma (HCC). A positive CD138 staining of the tumor cells likely contributed to the initial diagnosis of MM. Tumor cells were negative for AFP despite increased serum AFP. The lack of CK19, OCT3/4, and GATA3 ruled out a yolk sac tumor, which is a differential diagnosis for high serum AFP levels. HCC can develop in ectopic liver tissue without a liver mass. The large paraspinal mass may be the most likely primary site. Core biopsy confirmed it as a moderately differentiated HCC.

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