Images of Hematology

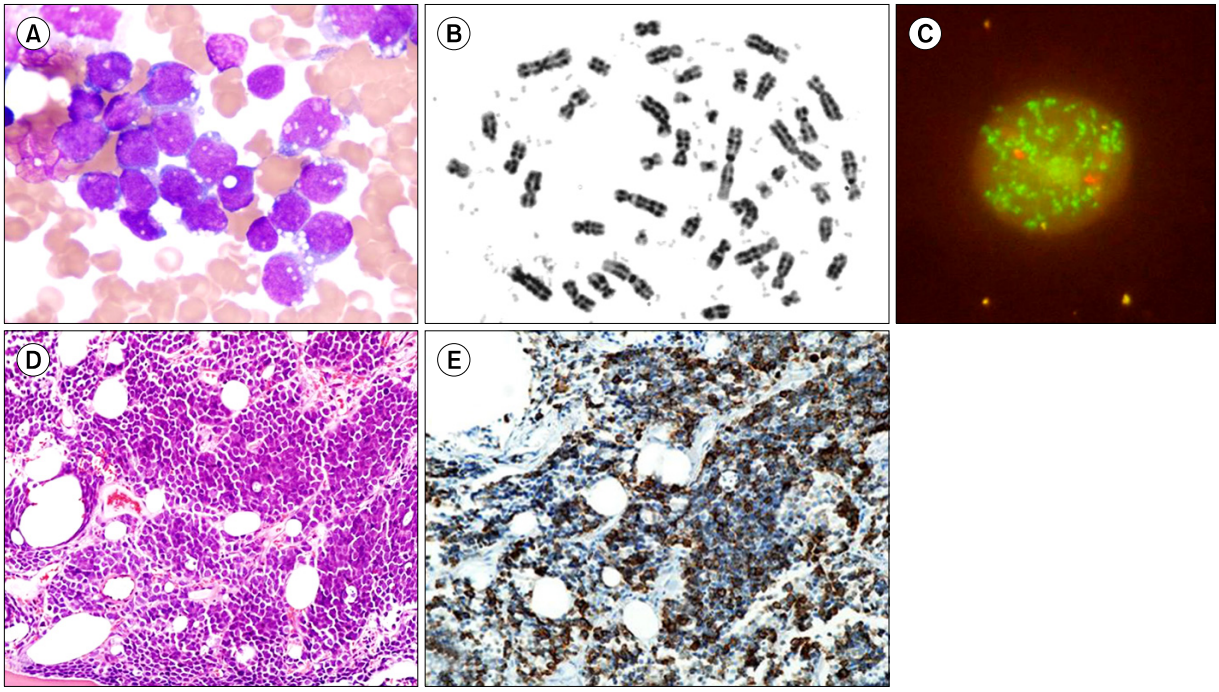
DOI: 10.5045/kjh.2011.46.2.67

The Korean Journal of Hematology
Volume 46 · Number 2 · June 2011

Bone marrow metastasis of small cell carcinoma of the lung mimicking Burkitt lymphoma/leukemias

Hye Ra Jung[1], Dong Seok Jeon[2], Keoun Uk Park[3], Jung Sook Ha[2]

Departments of [1]Pathology, [2]Laboratory Medicine, [3]Hemato-oncology, Keimyung University School of Medicine, Daegu, Korea



A 64-year-old man was admitted for the evaluation of severe lower back and bilateral leg pain that had persisted for a week. On spinal magnetic resonance images, diffuse abnormal signal intensity involving the whole bone marrow with patch enhancement was noted. CBC revealed the following: leukocyte count of 6.85×10^9/L; hemoglobin of 13.6 g/dL; and platelet count of 32.0×10^9/L. On bone marrow aspiration smear, diffuse infiltration of monotonous cells was found, although the clustering pattern was not distinct. Each cell had a high nuclear/cytoplasmic ratio, was slightly variable cell size, round to oval in shape, and had a slightly irregular nucleus with dispersed chromatin, rare indistinct nucleoli, and deeply basophilic cytoplasm with abundant vacuoles **(A)**. In cytogenetic study, no t(8;14) was detected and a complex karyotype with many double minutes (10-75 per cell) was found **(B)**. In FISH analysis, these double minutes were revealed as c-MYC gene amplification **(C)**. Bone marrow biopsy revealed hypercellular marrow with a starry sky-like appearance **(D)**. In immunohistochemistry of biopsy material, synaptophysin was positive **(E)**. We accordingly concluded bone marrow metastasis of small cell carcinoma. Thereafter, we could find primary origin of the small cell carcinoma at the lung by computed tomography.