Small Cell Carcinoma Mimicking Acute Leukemia

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A 72-year-old man presented with a 1-month history of lymphadenopathy. He was admitted to our hospital in May 2016. A complete blood count upon admission showed the following findings: hemoglobin, 13.0 g/dL; platelet count, 84×10⁹/L; and white blood cell count, 6.3×10⁹/L. His laboratory test showed increased lactate dehydrogenase (2,382 U/L). Computed tomography showed a small pulmonary nodule (1 cm) and lymphadenopathy at multiple sites such as the right neck (6 cm), mediastinum (6 cm), and right axillary lymph nodes (3 cm). A bone marrow sample showed marked hypercellularity, containing 72% blast-like cells, which were not aggregated (Picture 1, 2). We suspected acute leukemia. However, flow cytometry revealed that the blasts were negative for CD19, cytoplasmic CD3, and cytoplasmic myeloperoxidase. Immunohistochemical staining of the bone marrow specimen was positive for cytokeratin (Picture 3) and synaptophysin and negative for chromogranin and thyroid transcription factor 1, which confirmed the diagnosis of small cell carcinoma. Based on the lung involvement and the frequency of occurrence, we considered the lung to be the site of the primary tumor.

Small cell carcinoma mimicking acute leukemia is rare (1, 2); however, immunohistochemical staining should be performed as it may assist in making a quick and accurate diagnosis if blasts show the abnormal expression of surface antigen. Therefore, appropriate treatment can be initi-

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ated if small cell carcinoma can be distinguished, especially in elderly patients.

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References