Simultaneous occurrence of multiple myeloma and chronic myeloid leukemia

An 81-year old man was referred to our center because of asthenia and bone pain. His hemoglobin was 87 g/L, and WBC count 28.7 × 10^9/L, with 50% neutrophils, 5% basophils, 5% metamyelocytes, 7% myelocytes, 5% promyelocytes, 3% blasts, and occasional plasma cells in the peripheral blood, in addition to rouleaux (Figure 1). The platelet counts was 172 × 10^9/L. Total serum protein concentrations was 102 g/L with an IgA kappa monoclonal spike of 52 g/L. X-ray study showed generalized osteoporosis and lytic lesions in the skull. The bone marrow was hypercellular with increased myeloid precursors, basophilia, and 25% atypical plasma cells. The Philadelphia chromosome was seen in all metaphases analyzed, and bcr-abl rearrangement was demonstrated by polymerase chain reaction (PCR) analysis. Multiple myeloma (MM) and chronic myeloid leukemia (CML) were diagnosed and melphalan-prednisone treatment started. However, the myeloma progressed to plasma cell leukemia and the patient died a few months later.

Co-existence of myeloproliferative and lymphoproliferative disorders in the same patient is seldom observed.1 With regard to the association between CML and MM, the simultaneous diagnosis of these two diseases is exceedingly infrequent.2

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Key words: Multiple myeloma, Chronic myeloid leukemia.

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References

Figure 1. Peripheral blood smear of the patient, showing a plasma cell, a basophil, a metamyelocyte and rouleaux (May-Grünwald-Giemsa × 400).