Images from the Haematologica Atlas of Hematologic Cytology: primary myelofibrosis, micromegakaryocytic transformation

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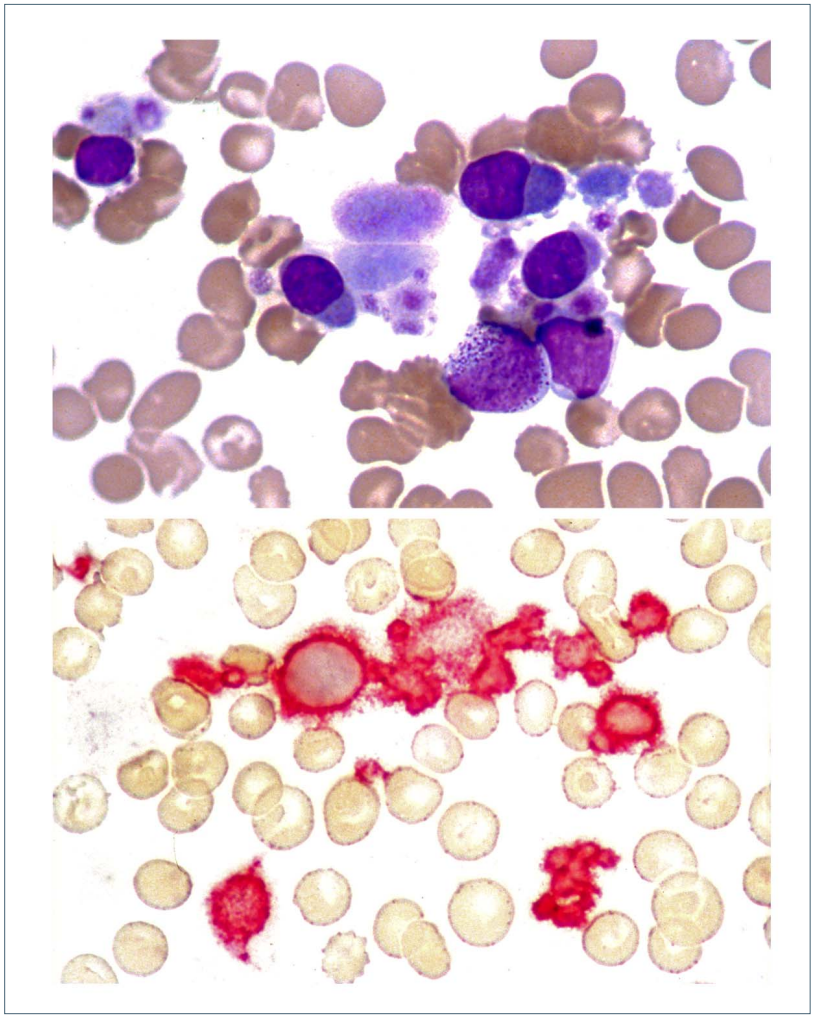

Approximately 15% of patients with primary myelofibrosis (PMF) develop terminal blast crisis, usually either myeloblastic or myelomonocytic, whereas the presence in the blood of immature cells exclusively of the megakaryocytic type is uncommon. In this case, diagnosed as PMF for many years, a peripheral blood smear reveals a group of cells with an eccentric nucleus, condensed chromatin, no nucleoli, basophilic cytoplasm and cytoplasmic protrusions. A granulocyte precursor and an undifferentiated blast can also be seen. Platelets are often giant and sometimes agranular (top image). Immunocytochemistry using an anti-CD61 monoclonal antibody demonstrates the megakaryocytic nature of the small mononuclear cells and of the blasts suggesting a diagnosis of micromegakaryocytic leukemia as transformation of PMF. Platelets are strongly positive to the immunoalkaline-phosphatase reaction (bottom image).[1]

Disclosures

No conflicts of interest to disclose.

Reference

1. Invernizzi R. Myeloproliferative neoplasms. Haematologica. 2020;105(Suppl 1):49-59.