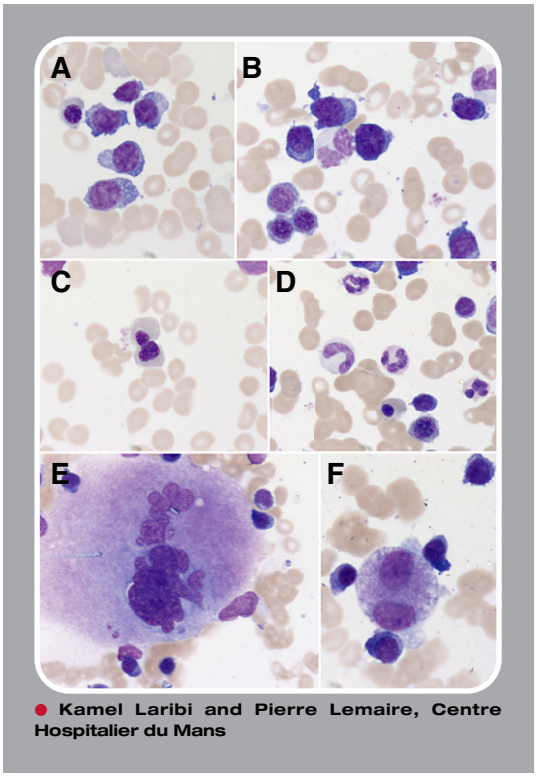
bloodwork
IMAGES IN HEMATOLOGY

IgD κ multiple myeloma and myelodysplastic syndrome



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An 82-year-old woman presented with left-hip pain. Radiographs revealed multiple bone lesions in the skull and left acetabulum. Laboratory tests showed a peak of monoclonal immunoglobulin D (IgD) κ at 5.1 g/L; albumin, 23 g/L; and hemoglobin, 9 g/dL. Other parameters were normal. Bone marrow showed involvement with 76% dysplastic plasma cells (panels A-B, F; May-Grünwald Giemsa stain, original magnifications ×100 [A-B] and ×63 [F]), associated with dysplasia in hematopoietic lineages, characterized by agranular and hyposegmented neutrophils (panel B), acidophilic erythroblasts with an irregular nucleus (panel C; May-Grünwald Giemsa stain, original magnification ×100), degranulated neutrophilic metamyelocytes and dwarf degranulated neutrophils (panel D; May-Grünwald Giemsa stain, original magnification ×100), cellular gigantism (panel E; May-Grünwald Giemsa stain, original magnification ×50), and a binucleated megakaryocyte (panel F).The karyotype was complex with hyperploidy. Fluorescence in situ hybridization showed an MYC rearrangement in 8q24 in 34% of the plasmocytes. Immunophenotyping of bone marrow showed CD71 (+149%), CD36 (+96%), and an Ogata score of 2. Next generation sequencing of the bone marrow revealed a TET2 nonsense mutation. An IgD κ International Staging System for Multiple Myeloma (ISS) score of 2 and standard-risk cytogenetics associated with refractory cytopenia with multilineage dysplasia were confirmed.

The patient was treated with a bortezomib (Velcade)-melphalan-dexamethasone regimen, consisting of 9 cycles, plus erythropoietin, and achieved very good partial response without an increase of cytopenia. IgD κ subtype myeloma is a very rare disease. However, the outcome appears to be affected by the ISS score, cytogenetic risk, and the type of treatment, as it is for other isotypes.

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