Intracranial extramedullary hematopoiesis associated with multiple myeloma

Figure Brain CT scan findings in intracranial extramedullary hematopoiesis

Brain CT scan, sagittal and axial views, showing multiple hyperdense extra-axial foci (arrows) surrounding the falx cerebri and dural convexity, and compressing the cortex of both cerebral hemispheres.

A 77-year-old woman with multiple myeloma for 5 years presented with obtundation, drowsiness, and disorientation over 15 days. Complete blood count revealed thrombocytopenia (25,000/ μ L). A brain CT disclosed multiple extra-axial hyperdense foci without bone destruction. Differential diagnosis included tumors (meningiomas, leukemia), subdural hematomas, and intracranial hemorrhages; the lesion's multiplicity and morphology were consistent with intracranial extramedullary hematopoiesis (IEH) (figure). Despite platelet transfusions, she died 2 days later of alveolar hemorrhage. Autopsy confirmed IEH and excluded erythropoiesis, reported in subdural hematomas. The formation of blood cells outside the bone marrow is usually related to anemia or lymphoproliferative disorders and is uncommon in multiple myeloma.¹ IEH can cause seizures, hydrocephalus, or cognitive changes.²

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