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Myelodysplastic syndrome with ring sideroblasts presenting as postmediastinal extramedullary hematopoiesis

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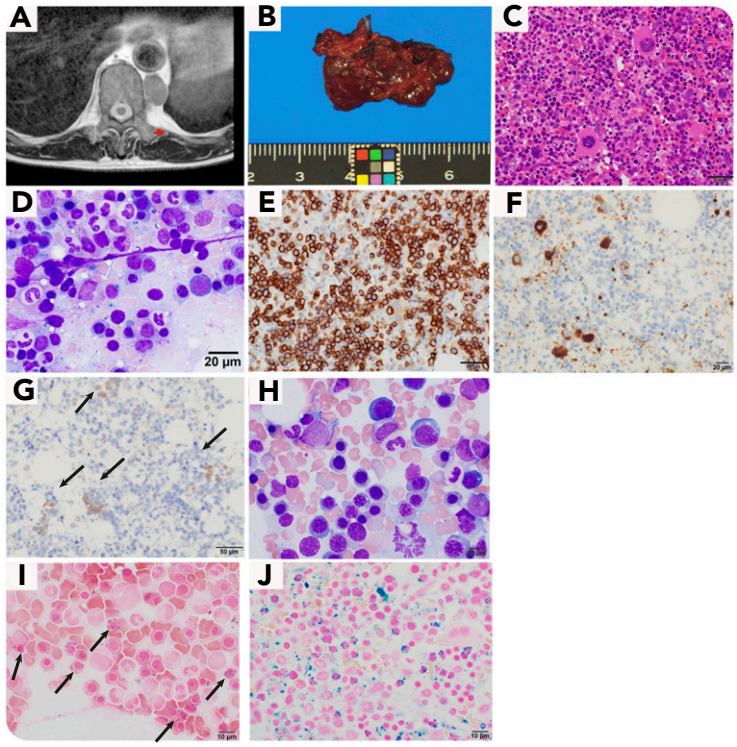

A 56-year-old man presented with mild anemia, a slight increase in platelets (leukocyte count, 4920/μL; hemoglobin, 11.5 g/dL; platelet count, 375 × 10^3/μL), and mild splenomegaly. A postmediastinal mass was noted on computed tomography (arrow; panel A). The resected mass was ~2.5 cm in diameter (panel B). Histologically, the lesion was trilineage hematopoietic tissue and diagnosed as extramedullary hematopoiesis (EMH) with erythroid predominance (panels C and E; hematoxylin and eosin stain [C], CD71 [E]; original magnification ×200). Hypolobular granulocytes and megaloblastic change in erythroid cells were found on touch specimen (panel D; May-Giemsa stain, original magnification ×600). Dysplastic megakaryocytes (panel F; CD61, original magnification ×400), aggregation of fetal hemoglobin–positive cells (panel G, arrows; original magnification ×200), and a few scattered $p53^+$ cells were also observed. $CD34^+$ blasts did not increase. Because peripheral blood abnormalities remained, bone marrow aspiration was performed. Histologically, the findings were similar to those of EMH; however, Berlin blue staining revealed many sideroblasts in the clot, which were confirmed to be ring sideroblasts on the smear specimen (58% of erythroid series, panels H and I, arrows; May-Giemsa stain [H], Berlin blue stain [I]; original magnification, ×1000). Berlin blue staining for EMH tissue was performed afterward, and many sideroblasts were detected. (panel J, original magnification, ×1000). *BCR-ABL*, *JAK2*, *MPL*, and *CALR* mutation and del(5q) tests were negative genetically (*SF3B1* mutation testing not performed).

The final diagnosis was myelodysplastic syndrome with ring sideroblasts.

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