bloodwork
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Internuclear bridging outside of primary myelodysplasia and congenital dyserythropoietic anemia

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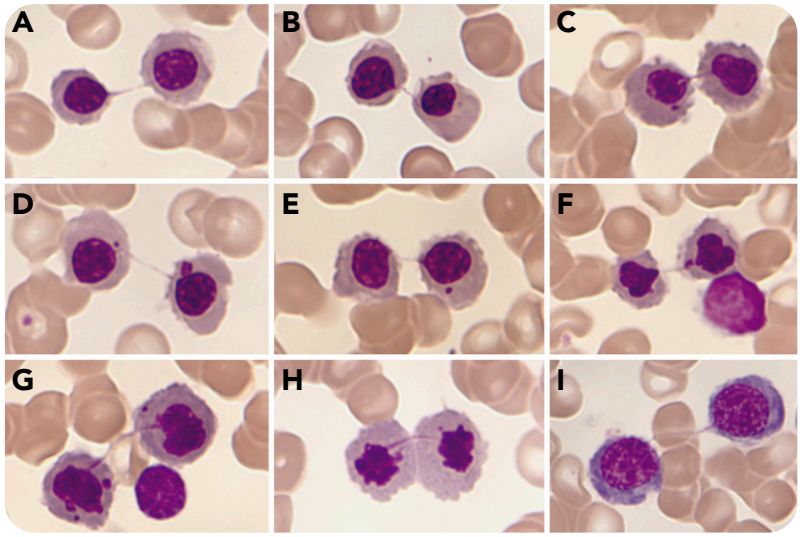

A 53-year-old man with no history of anemia or macrocytosis was newly diagnosed with HIV disease (viral load, 1 340 000 copies per mL; CD4 count, 0.089 × 10^9/L) and Burkitt lymphoma. A complete blood count showed anemia (hemoglobin, 10.1 g/dL; mean corpuscular volume, 86.8 fL), without other cytopenias. The bone marrow aspirate was moderately hypocellular with 22% erythroid series that exhibited a severe dyserythropoiesis. The most significant finding was the presence of internuclear bridging in 2% of the erythroblasts, most of them being between orthochromatic erythroblasts (panels A-G; original magnification ×1000, May-Grünwald-Giemsa stain); occasionally, the internuclear bridging was double and observed at the end of the cytokinesis (panel H; original magnification ×1000, May-Grünwald-Giemsa stain) and exceptionally between polychromatophilic erythroblasts (panel I; original magnification ×1000, May-Grünwald-Giemsa stain). Bone marrow analysis was negative for Burkitt lymphoma. The karyotype was 46,XY[20], and targeted next-generation sequencing had no findings. Internuclear bridging disappeared, and the viral load was undetectable following chemotherapeutic and antiretroviral therapies for 4 months.

Internuclear bridging between erythroblasts resulting from abnormal mitosis is an uncommon cytological feature highly suggestive of myelodysplastic syndrome (MDS). Outside of myelodysplasia, this finding can be seen in congenital dyserythropoietic anemia. Its observation as a reactive phenomenon is rare. HIV disease usually causes hematopoietic dyspoiesis; however, additional internuclear bridging is not normally observed. An MDS was excluded and, at that time, the patient had not received any treatment.

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