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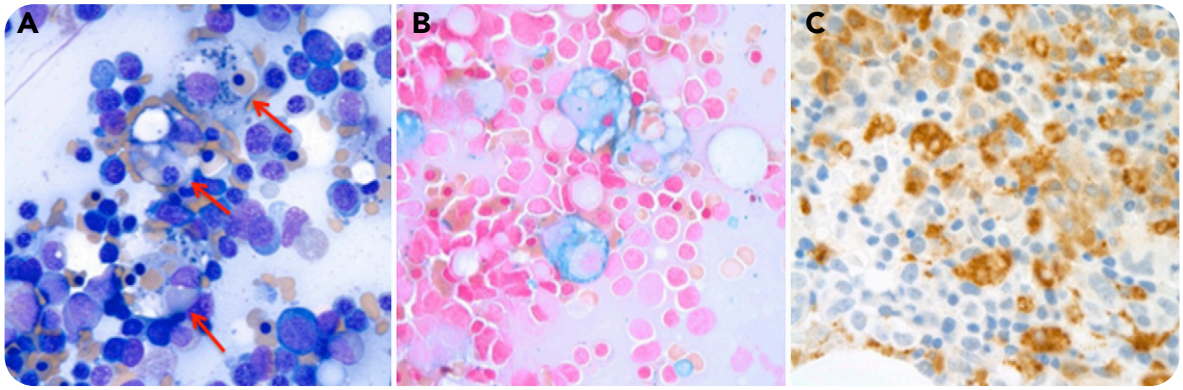
# Erythrophagocytosis on bone marrow found in severe autoimmune hemolytic anemia with reticulocytopenia

**Ilyas Sahin and Rabin Niroula, The Warren Alpert Medical School of Brown University**




A 43-year-old male presenting with jaundice had a hemoglobin (Hb) of 4 g/dL, platelet count of 153 × $10^9$/L, total bilirubin of 6.1 mg/dL with indirect bilirubin of 5.1 mg/dL, lactate dehydrogenase of 545 IU/L, and haptoglobin of <8 mg/d. Peripheral smear showed spherocytes. The direct antiglobulin test result (immunoglobulin G and C3) was positive, and an indirect antiglobulin test confirmed autoimmune hemolytic anemia (AIHA). The absolute reticulocyte count was 0.1%. After no improvement on prednisone, IV immunoglobulin and rituximab were added due to an ongoing need for transfusions. Bone marrow (BM) aspirate showed erythroid hyperplasia and phagocytosis of just erythroid precursors by macrophages (panel A, original magnification ×100, Wright-Giemsa stain; panel B, original magnification ×100, Prussian blue for iron). BM biopsy showed diffusely increased macrophages (panel C, original magnification ×100, CD68 immunohistochemical stain) but did not meet diagnostic criteria for hemophagocytic lymphohistiocytosis, and no mutations associated with familial hemophagocytic lymphohistiocytosis were found. The Hb stabilized around 13g/dL, with other counts stable.

In a subset of AIHA cases, reticulocytopenia is observed. It is possible that autoantibodies against erythroid precursors lead to phagocytosis of autoantibodies–opsonized precursor cells. AIHA cases with reticulocytopenia may be transfusion dependent until response to treatment is achieved.

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