

Internuclear Bridging of Erythroid Precursors in the Peripheral Blood Smear of a Patient with Primary Myelofibrosis

Primer Miyelofibroz Tanılı Bir Hastanın Çevre Kanı Yaymasında Eritroid Öncüllerin Nükleuslar Arası Köprüleşmesi

Roger K. Schindhelm¹, Marije M. van Santen², Arie C. van der Spek³

¹Northwest Clinics, Department of Clinical Chemistry, Hematology and Immunology, Den Helder, the Netherlands

²Symbiant Pathology Expert Center, Alkmaar, the Netherlands

³Northwest Clinics, Department of Internal Medicine, Den Helder, the Netherlands

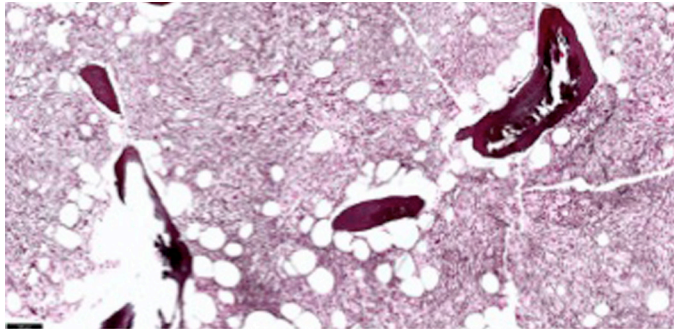


Figure 1. Bone marrow biopsy showing marked increase in reticulin fibers, especially in the areas of megakaryocyte clustering (Gomori, 10 \times).

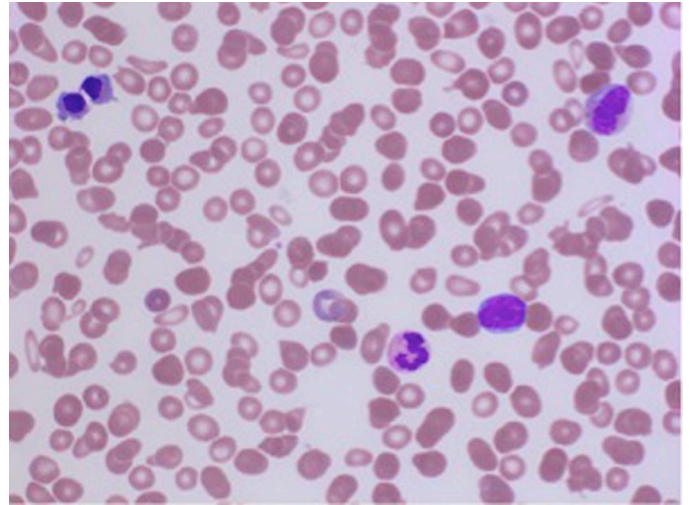


Figure 2. Blood smear demonstrating teardrop cells, erythroid precursor with internuclear bridging, and one blast cell (May-Grünwald-Giemsa, 50 \times).

An 84-year-old male diagnosed with primary myelofibrosis based on WHO grade 2-3 fibrosis (Figure 1) and the presence of the JAK2-V617F mutation was treated with supportive care. During 2 years of follow-up, his hemoglobin level was maintained at approximately 6.5 mmol/L and platelet count declined from 128 $\times 10^9$ /L at presentation to 50 $\times 10^9$ /L. White blood cells did not exceed 12.0 $\times 10^9$ /L, while the fraction of blast cells increased to 10%. Elevated levels of teardrop cells were observed and the nucleated red blood cell count gradually increased from non-detectable to 2.4 $\times 10^{12}$ /L. Recent peripheral

blood smears showed bi- and tri-nucleated red blood cells, and even more notably, erythroid precursors with internuclear chromatin and cytoplasmic bridging (Figures 2 and 3). In concurrence with laboratory findings, physical examination revealed progressive splenomegaly (8 cm palpable below the rib margin) and weight loss. Erythroid precursors with internuclear bridging in a blood smear is a rare morphological finding and is considered a diagnostic morphologic feature in patients with congenital dyserythropoietic anemia type I and a morphological manifestation of dyserythropoiesis in



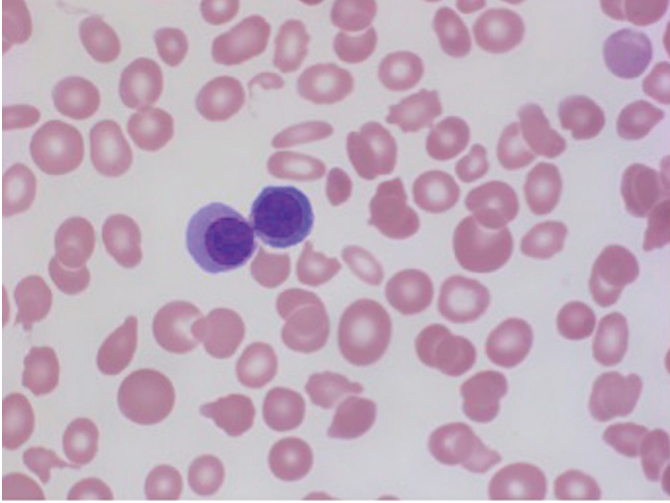


Figure 3. Blood smear demonstrating erythroid precursor with internuclear and cytoplasmic bridging (May-Grünwald-Giemsa, 100x).

patients with myelodysplastic syndrome [1,2]. In patients with myeloproliferative neoplasms, erythroid precursors' internuclear bridging may indicate the transition to a more aggressive phase.

Keywords: Primary myelofibrosis, Internuclear bridging, Erythrocytes

Anahtar Sözcükler: Primer miyelofibroz, Nükleuslar arası köprüleşme, Eritrositler

Conflict of Interest: The authors of this paper have no conflicts of interest, including specific financial interests, relationships, and/or affiliations relevant to the subject matter or materials included.

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