

Images in Clinical Hematology

Hungry megakaryocytes on the hunt? An unusual case of extensive megakaryocyte emperipolesis

S. Vijaya Devi ^a, Richa Gupta ^{b,*}

^a Maulana Azad Medical College, New Delhi, India

^b University College of Medical Sciences, Delhi, India

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An 11-year-old female presented with fever and thrombocytopenia (Platelet count - $25 \times 10^9/L$). Bone marrow smears revealed hyperplasia and emperipolesis in all megakaryocytes containing intact lymphocytes and neutrophils. (Figs. 1 and 2) No etiology was found. The patient was given intravenous immunoglobulin and steroids on presumption of Immune thrombocytopenia, to which she responded well (Platelet count after 4 months - $108 \times 10^9/L$).

Some emperipolesis may be seen in various disorders, including Immune thrombocytopenia.^{1,2} Aslan D postulated that, in ITP, emperipolesis contributes to megakaryocyte dysfunction and poor response to therapy.³ This is an unusual case where all megakaryocytes show extreme degree of emperipolesis, yet the patient responded well.

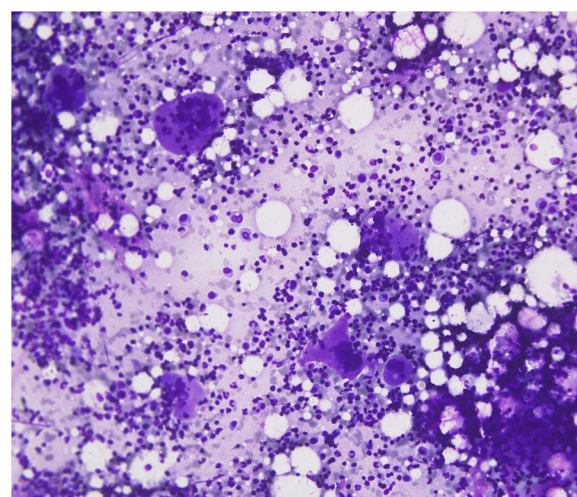


Figure 1 – Bone marrow aspirate showing megakaryocytic hyperplasia with extensive emperipolesis; Geimsa stain, 400x.

* Corresponding author at: Room 427, Department of Pathology, University college of Medical Sciences, Dilshad Garden, Delhi 110095, India.

E-mail address: richagupta0209@gmail.com (R. Gupta).

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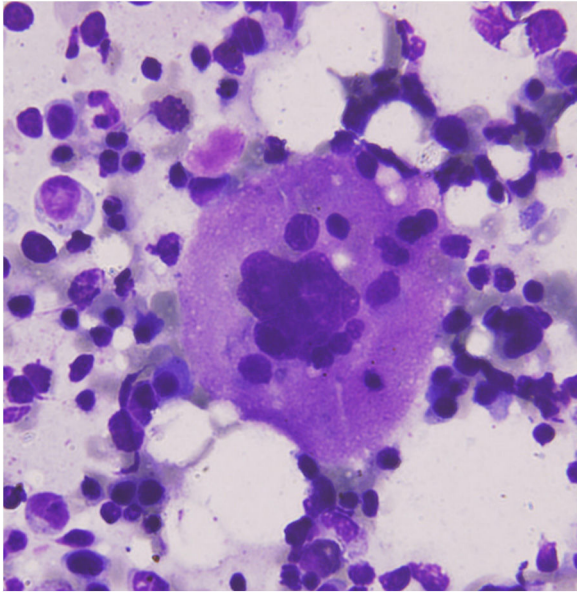


Figure 2 – Bone marrow aspirate showing a megakaryocyte with engulfed neutrophils and lymphocytes; Geimsa stain, 1000 $\times$.

Conflicts of interest

The author declares no conflicts of interest.

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