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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2007, 24(4):402

Histopathology Quiz - Case 1

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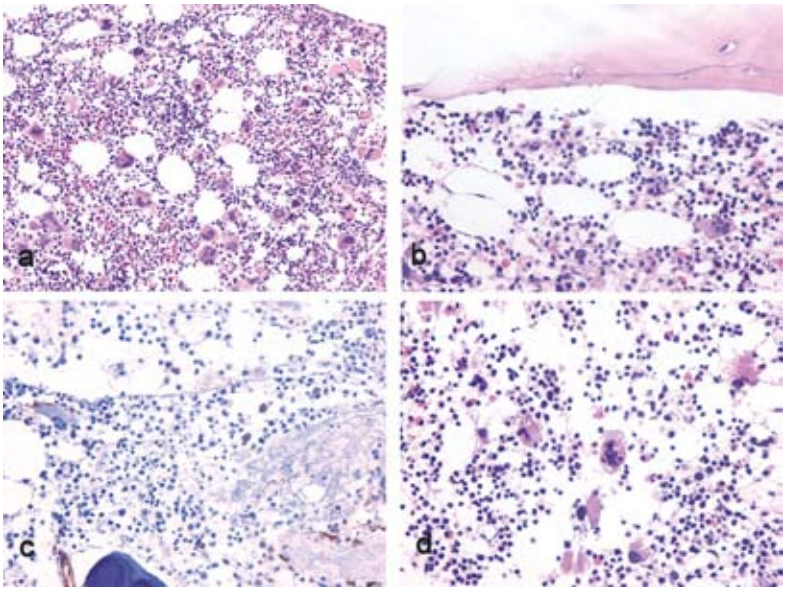
An 82 years old female had a routine blood analysis and was admitted to our hospital because of anemia and thrombocytosis. The patient did not have any other symptoms, did not experience major bleeding in the last few months and did not refer having any relevant history. When first examined at hospital the patient did non have any signs, whereas splenomegaly was not found on examination. The complete blood count (CBC) showed Hb 29.5%, MCV 85.8 fl, WBC 9.99×10^9/l, (neutrophils 67.3%, lymphocytes 17.4%, monocytes 6%, eosinophis 0.8%, basophils 0.8%) and platelets 1.277×10^9/l with MPV 9.7 fl. The ESR was in normal limits (62 mm/h) and direct Coombs test was negative. Bleeding time was measured and was found as longer than 15 minutes. The patient also underwent a bone marrow biopsy.



Bone marrow flow cytometry showed the presence of an increased number of megakaryocytes with irregular morphology, along with mild basophilia and eosinophilia and some sea blue histiocytes.

Histological examination of bone marrow trephine sections showed increased cellularity. The megakaryocytes were markedly increased and clustered, whereas they were large and hyperlobulated (Figure a). There were very few megakaryocytes with dysplastic features. One of the main findings was the presence of extensive megakaryocytic emperipolesis (Figure d), which refers to the engulfment of erythroid precursors, as well as mature and mainly immature myeloid cells by megakaryocytes. Emperipolesis index, as defined in previous investigations, was quite high (80%).

The myeloid to erythroid cells ratio was 3:3. The erythroid lineage displayed marked dyseryhropoiesis with the presence of binuclear cells and disorganopoiesis (Figure b). The myeloid lineage displayed left shift whereas there were only few mature granulocytes. Blast count was approximately 1%, as demonstrated by CD34 immunostaining (Figure c). Silver stain revealed the presence of iron stores whereas Gomori stain slight fibrosis. A diagnosis was established based on the combination of the clinical and laboratorial findings with the histological bone marrow trephine findings illustrated on figures.

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Diagnosis: *Refractory anemia with ringed sideroblasts and marked thrombocytosis.*