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Hemophagocytic lymphohistiocytosis or erythroblastic islands?

Hémophagocytose ou îlots érythroblastiques ?

Capucine Habay[1]
Julie Plantamura[1]
Céline Roche[1]
Aurore Bousquet[1]

[1] Département des laboratoires, Hôpital d'instruction des armées Bégin, Saint-Mandé, France

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A 71-year-old man was hospitalized for the management of a septic monoarthritis associated with an episode of hematuria. He underwend a fith-line therapy for the management of a castration-resistant prostate adenocarcinoma. Biological investigations performed after treatment and decreases of inflammatory syndrome revealed bicytopenia (hemoglobin: 8.5 g/dL, reference interval, 12.9-16.7 g/dL, platelet count: 78×10^9/L, reference interval, 150-300×10^9/L) associated with hyperferritinemia (3,100 µg/L; reference interval, 30-400 µg/L), hypertriglyceridemia (2.84 mmol/L, reference interval, < 1.7 mmol/L) and hypofibrinogemia (1.22 g/L, reference interval, 2-4 g/L). Based on the clinical context and these biological results, haemophagocytic lymphohistocytosis (HLH) was suspected and a bone marrow aspiration was performed. If examination of marrow smears did not revealed haemophagocytosis, numerous erythroblastic islands were observed *(figure 1)*.

These functional units are composed of a central macrophage surrounded by a ring of developing erythroblasts and serve as specialised niches where terminal erythroid differentiation takes place. The central macrophage provides nutrients as well as proliferative and survival signals to each precursor that comes into intimate contact with it. One of the most specific processes performed by the central macrophage is the engulfment of the erythroblast's nucleus, resulting in the formation of an enucleated reticulocyte and subsequent recycling of nucleotides after nuclei degradation. Erythroblastic islands are rarely seen in marrow aspirates, as they tend to fragment during puncture

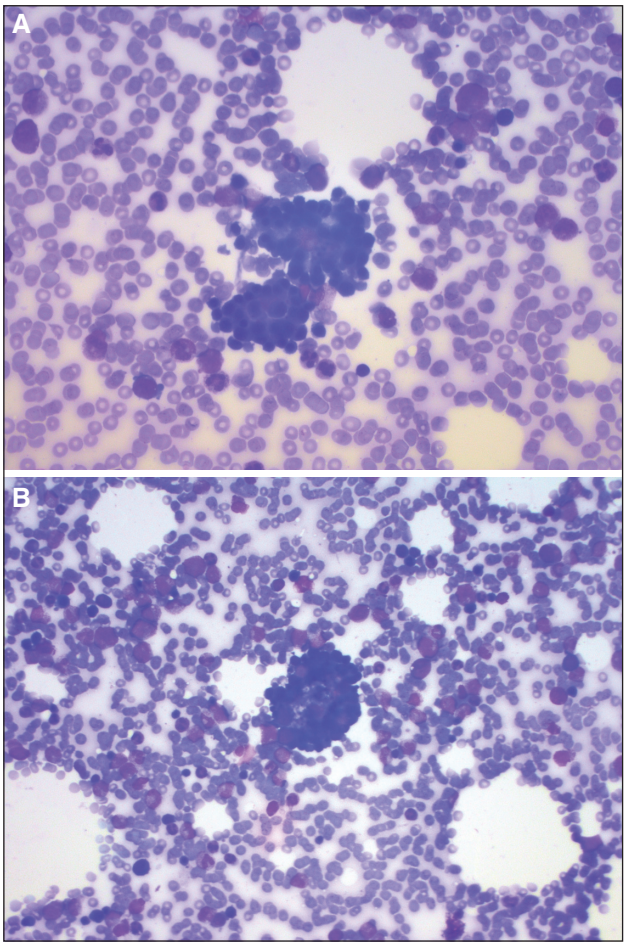

Figure 1. A. Erythroblastic island on a medullar smear (MGG x 1000); **B**. Erythroblastic island on a medullar smear (MGG x 400).

Correspondence : C. Habay
<habay.capucine@gmail.com>

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aspiration or smearing of the sample. Excess of such islands may indicate an increase in red cell production stimulated by stress conditions observed (inflammatory syndrome, chemotherapy, hematuria).
Finally, the patient did not have HLH although erythroblastic islands can mimic haemophagocytosis [1, 2].

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