

## PRATIQUE QUOTIDIENNE

### Bone marrow cell cannibalism and phagocytosis

### Cannibalisme cellulaire et phagocytose dans la moelle osseuse

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**Clinical Case**

A 66-year-old man with leucocytosis, anemia and thrombocytopenia in blood count cells. Peripheral blood smear revealed polymorphonuclear neutrophils (68%), monocytes (2%), eosinophils (2%), immature granulocytes (8%), lymphocytes (20%) and rare circulating erythroblasts.

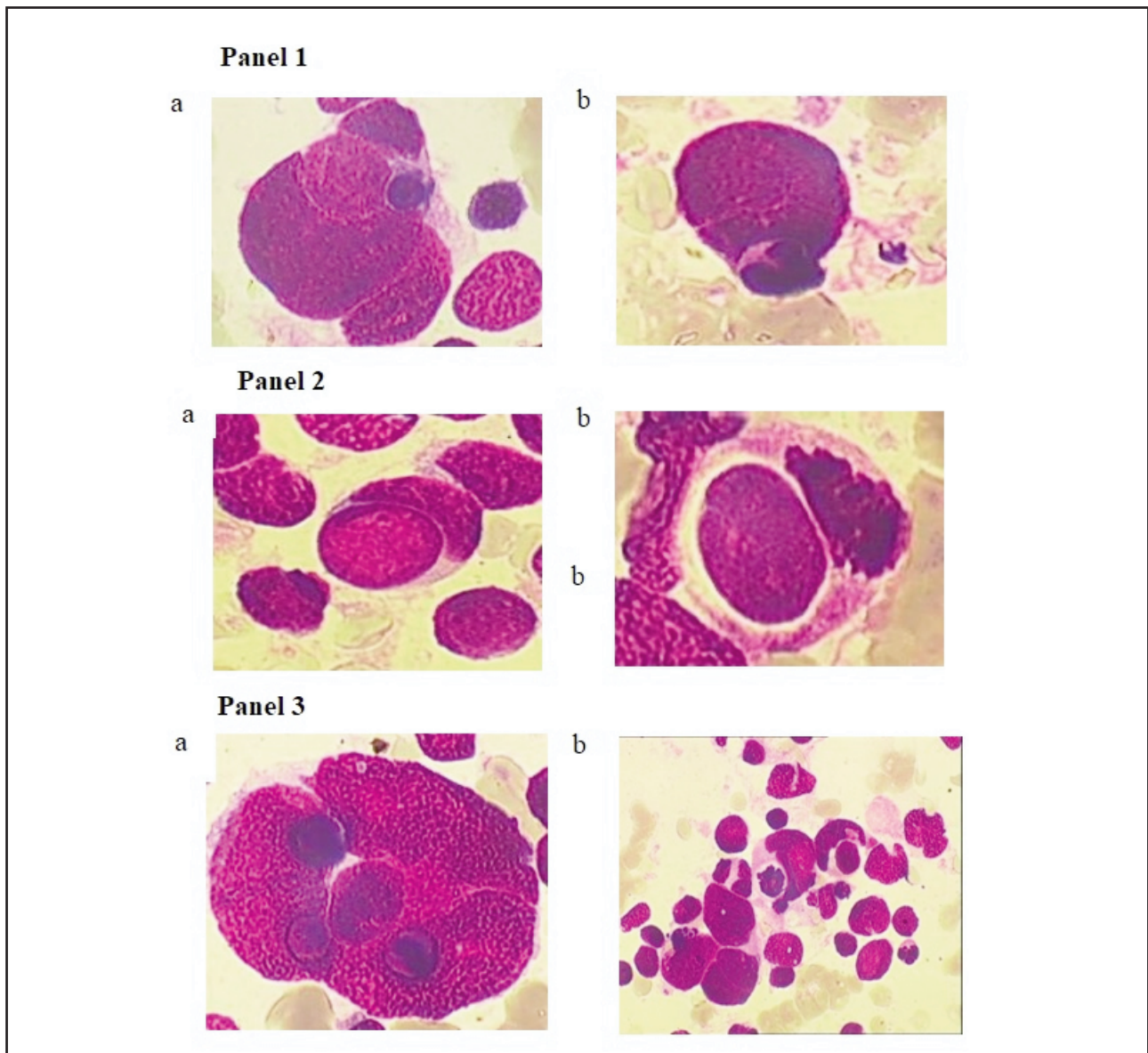
A bone marrow aspirate smear was hyper-cellular and mainly infiltrated by cohesive cells grouped in clusters of 10 or more which had variable size with irregular nuclei, without nucleoli and reduced cytoplasm. A non-hematopoietic lineage was suspected. Rares tumor cells showed hemophagocytic activity of erythroblasts, lymphocytes and polymorphonuclear (Image 1). Cannibalism (tumor cell vs tumor cell phagocytic activity) (Image 1) and exceptional complex cannibalism (tumor cell was engulfing the other and this complex was further engulfed by another cell) was also observed in many malignant cells (Image 1, Panel 3: a,b). Bone marrow biopsy was indicated, whereas patient was lost to follow up.

Cannibalism is a rare phenomenon. It has been reported in giant cell carcinoma of lung (1) and malignant thymoma (2). On the other hand, complex cannibalism has infrequently been described in histology in oral squamous cell carcinoma (3).

**Key words:** cannibalism, bone marrow, extra hematopoietic cell

**Mots clés :** cannibalisme, moelle osseuse, cellules extra hématopoiétiques

**Key message:** Cytologists should be aware that cannibalism's phenomenon can be detected in bone marrow aspiration and confirmed by bone marrow biopsy. It is associated with a very bad prognosis.



**Image 1: Bone marrow aspirate. MGG stain 1,000 X. Panel 1: one erythroblast is internalized by a malignant cell (a), one polynuclear is internalized by a malignant cell (b). Panel 2: One malignant cell is completely internalized by another cell (a), internalized cell is altered (b). Panel 3: complex cannibalism (a, b).**

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