

Images in haematology

HIV-related bone marrow changes; A case of a young male with pyrexia of unknown origin

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A 34-year-old male presented with a compound fracture of the right 4th metatarsal bone following an accidental fall. His condition was subsequently complicated with urosepsis and acute renal failure followed by pulmonary embolism and deep vein thrombosis. He also had persistent fever not responding to broad-spectrum antibiotics.

His full blood count showed worsening pancytopenia. There was no significant morphological abnormality in the blood picture and ultrasound scan of the abdomen revealed no organomegaly.

Bone marrow aspiration (Figures 1, 2 & 3) showed normocellular fragments with moderately suppressed erythropoiesis and mildly suppressed granulopoiesis with occasional dysplastic neutrophils. Megakaryopoiesis was increased with many dysplastic forms. Prominent histiocytic activity was noted with occasional haemophagocytic activity.

Additionally, trephine biopsy showed loose megakaryocytic clustering (Figure 4).

He was subsequently found to be HIV positive.

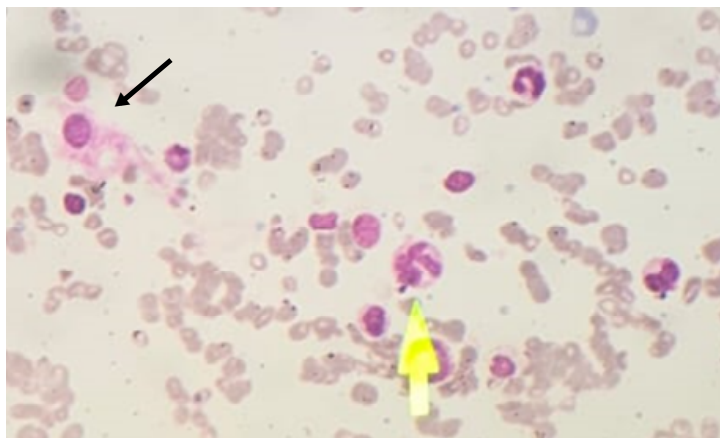


Figure 1. Bone marrow aspiration showed suppressed erythropoiesis and granulopoiesis with dysplastic neutrophils (yellow arrow) and increased histiocytic activity (black arrow).

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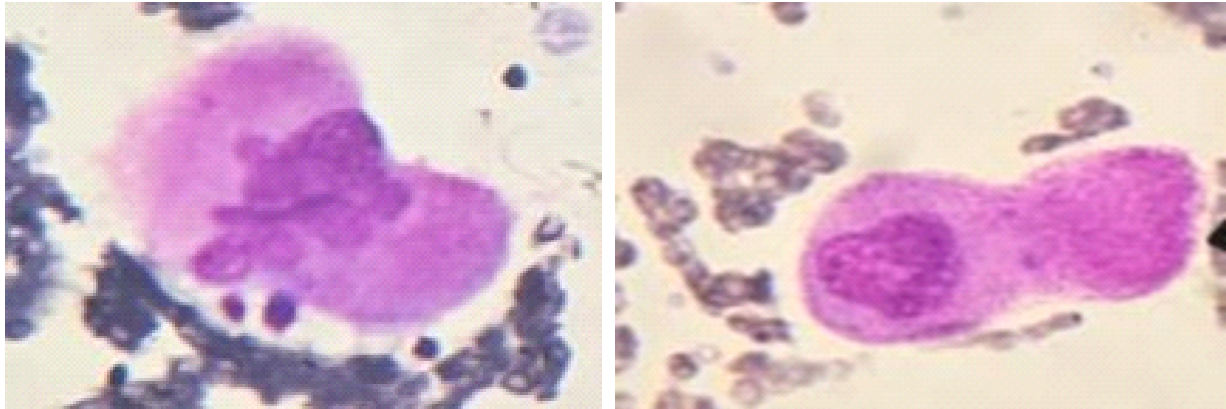


Figure 2. Dysplastic megakaryocytes.

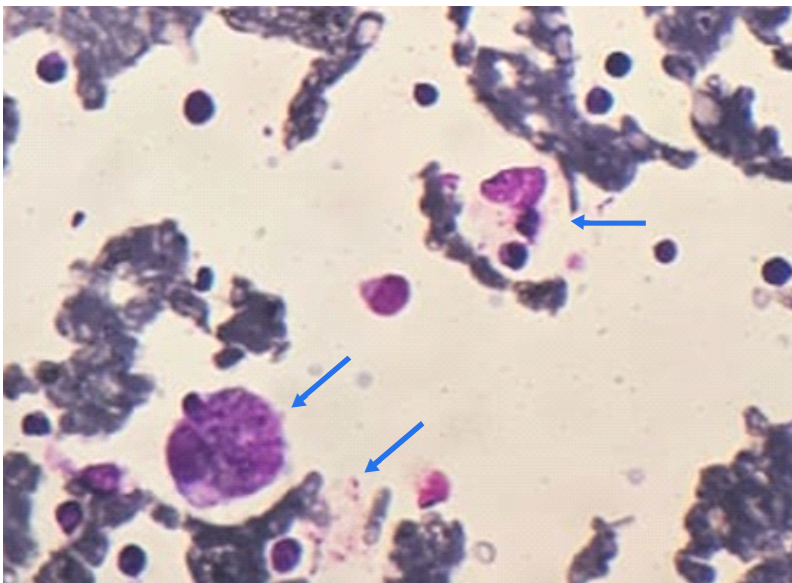


Figure 3. Prominent haemophagocytic activity.

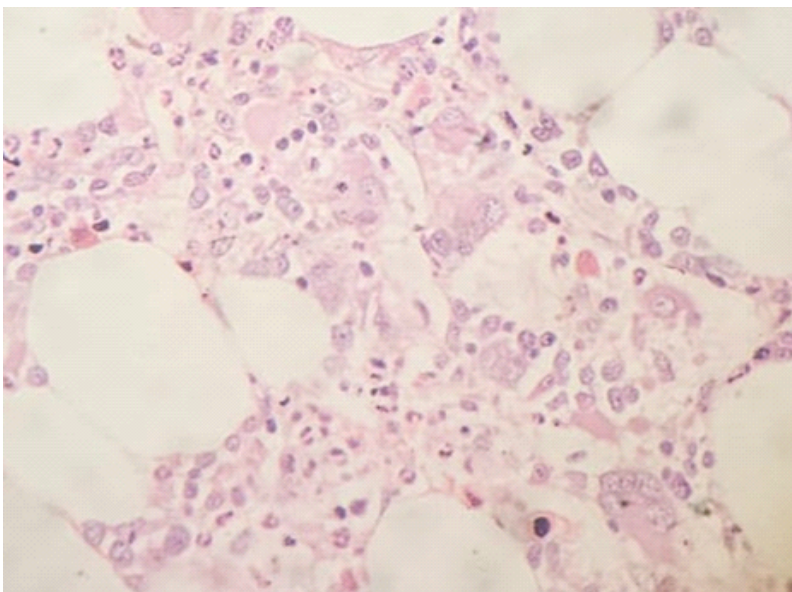


Figure 4. Loose megakaryocytic clustering.

References

1. Bain BJ, Clark DM, Wilkins BS. Bone marrow pathology. 5th Edition; 2019.
2. Hoffbrand AV, Higgs DR, Keeling DM, Mehta AB. Postgraduate Haematology. Seventh Edition; 2016.