

HS1246

The film comes from a 61-year male having undergone chemotherapy for acute myeloblastic leukaemia. The complete blood count showed Hb 9.6 g/dL, RBC $3.27 \times 10^{12}/L$, Hct 0.287 L/L, MCV 88.0 fL, MCH 28.5 pg, WBC $81.5 \times 10^9/L$ and Platelet $29 \times 10^9/L$.

A severe degree of leucocytosis with circulating blast cells of more than 90% is noted in the blood film. Blasts are medium in size with a high nucleus-to-cytoplasm ratio. Nuclei of open chromatin are either round or irregular with the presence of one to two nucleoli (Figure 1). Occasional cytoplasmic granules and vacuolations are present (Figure 2). Auer rods are not found. Most neutrophils display a normal morphology. Red cells are mildly anisocytic and nucleated red cells are also seen. There is a marked degree of thrombocytopenia.

Bone marrow smear demonstrates hyper-cellularity with heavy infiltration of blast cells of same morphology noted in circulating blasts. The cytochemical stainings of Sudan Black B and non-specific esterase are positive and negative, respectively. The immunophenotyping of blasts displays the positivity of the myeloid markers (cytoplasmic MPO, CD33 and CD117a) and negativity of both B- and T-lymphoid markers. Karyotyping shows no cytogenetic abnormality. The findings are consistent with acute monoblastic leukaemia.

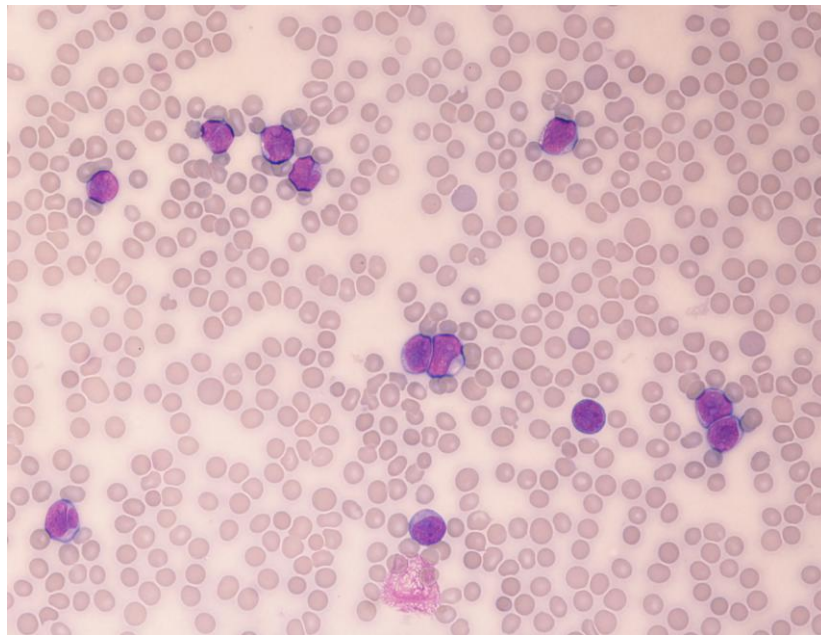


Figure 1. Monoblasts display reticular chromatin and nucleoli (400x magnification).

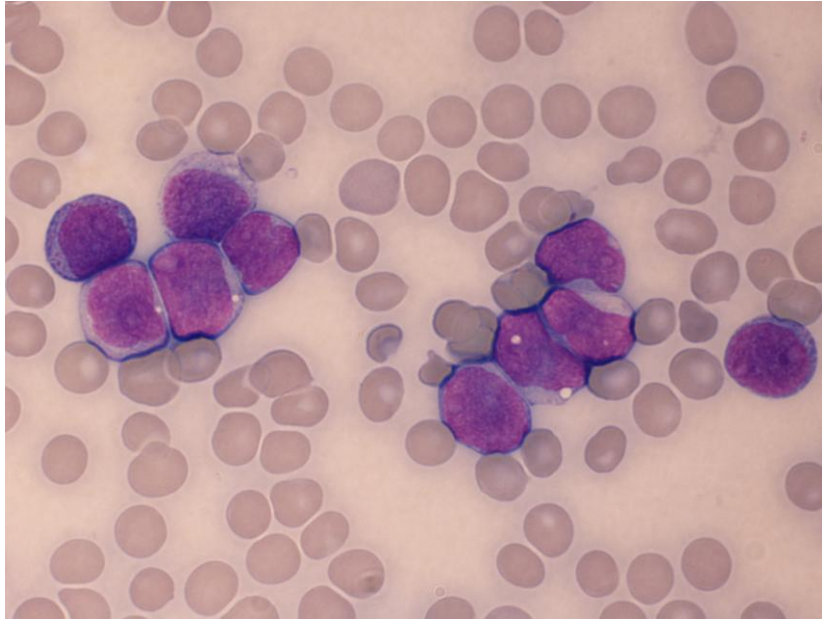


Figure 2. Monoblasts with cytoplasmic granules and vacuolations are occasionally seen (1,000x magnification).