

Image Quiz

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Peripheral Blood Smear in a Patient with Pyrexia

TD Ekanayake, S Athauda

National Hospital Kandy, Sri Lanka.

Correspondence:

TD Ekanayake

E-mail: thilinde17@gmail.com

 <https://orcid.org/0009-0000-6956-1381>

A 56-year-old, previously well female presents with fever, fatigue, easy bruising and generalized myalgia for 2 weeks duration. There was no other constitutional symptoms and physical examination was unremarkable.

Her investigations are as follows:

ESR 27mm/1st hr

Protein 63g/dl, Albumin 40.7 g/dl, Globulin 22.7 g/dl,

WBC- 184x10⁹/l, Plt 38x10⁹/l, Hb 12.1g/l,

The blood picture is Shown below.

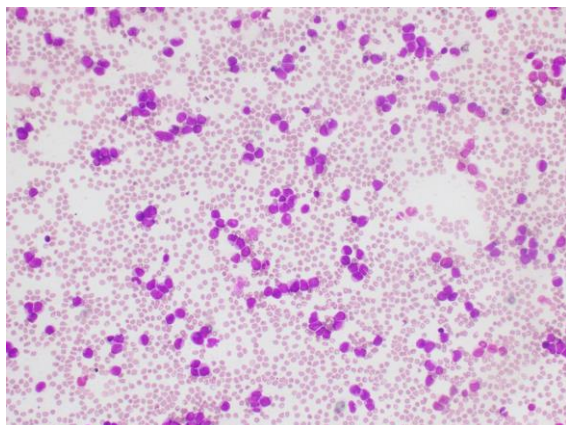


Figure 1

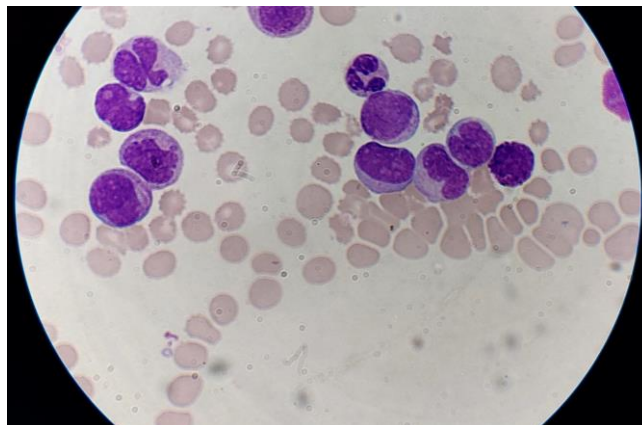


Figure 2

1. What is the diagnosis?
2. How would you confirm the diagnosis?

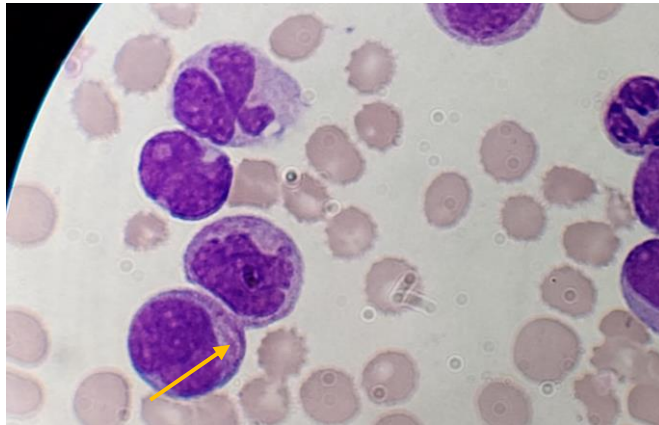


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ANSWER

1. Blood picture shows normochromic and normocytic polychromatic cells with NRBC. Marked leukocytosis with circulating blast. Those are large cells with high nuclear /cytoplasmic ratio, dispersed chromatin, two –three prominent nucleoli, scanty cytoplasm. Aure rods (arrow) are cytoplasmic inclusions noted in myeloid blasts pointing towards a diagnosis AML. Further, severe thrombocytopenia is also noted.

Comment- Appearances are compatible with that of acute myeloid leukaemia.



2. Bone marrow biopsy - Sudan black and myeloperoxidase stain will be positive.
Immunophenotyping with flow cytometry - To confirm AML and differentiate sub types of AML

REFERENCES

1. Vakiti A, Reynolds SB, Mewawalla P. Acute Myeloid Leukemia. [Updated 2024 Apr 27]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK507875/>