

March Slides

Slide 1

See case study opposite.

Slide 2

81% Atypical Lymphocytes, severe neutropenia.
RBC auto agglutination.
Severe Thrombocytopenia.
Immunophenotyping required.
Lymphoma.

Slide 3

Anaemia.
Discreet aniso-poikilocytosis(+), presence of elliptocytes/ovalocytes.
Hypochromic(+) RBCs.
Severe thrombocytosis, with the presence of rare macro-platelets/giant platelets.

Expert's comment:

Diagnostic approach:
Take the picture as a whole:
1/ Inflammatory cause (most likely)?
2/ Haematological cause (MPD)?

Slide 4

WBC $30 \times 10^3/mm^3$, 74% Lymphocytes numerous smear cells? CLL

Slide 5

Lymphopenia.

Slide 6

Nothing to report.



This issue

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Monthly Digital Case Study **P.2**
Case Study Slide 1 Continued **P.2**

**Monthly Digital Case Study Presentation
March 2024, Slide 1**

FBC Results

WBC $48.8^* (10^3/mm^3)$	Neutrophils 83.1%
RBC $2.38^* (10^6/mm^3)$	Lymphocytes 1.5%
HGB $7.5^* (g/dL)$	Monocytes 2.9%
HCT 23.1 (%)	Promyelocytes 1.5%
MCV 97 (fL)	Myelocytes 5.1%
MCH 32.5 (pg)	Metamyelocytes 5.9%
MCHC 32.5 (g/dL)	Normoblasts, Erythroblasts 2
PLT $270 (10^3/mm^3)$	

Clinical Details

Male age 56, pulmonology unit, multiple alarms on leucocyte differential

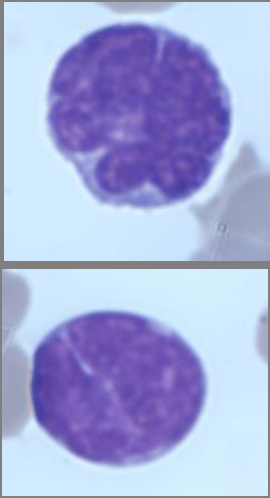
Slide Information

Anaemia.
Leukocytosis.
Neutrophilia. Hyposegmented neutrophils (band cells)/Immature granulocytes.
Monocytosis.
No Blastosis associated with myelemia.
Presence of rare erythroblasts.

Expert's comments:

Diagnostic approach:
1/ First exclude a non-haematological cause (Splenomegaly).
2/ If haematological cause: atypical Myeloproliferative disorder? (CML not the initial diagnosis).

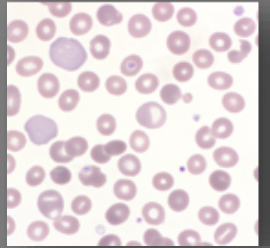
Cell Quiz



A patient presents with numerous cells as above. What further investigation should be performed?

Last Month's Quiz

Can you name a condition where this red cell picture would be seen?



Right answer:
The blood film is taken from a patient with haemolytic anaemia. This anaemia is a condition wherein the RBCs are destroyed faster than the bone marrow is able to replace them.
The film shows RBC fragments, Spherocytes and stomatocytes.

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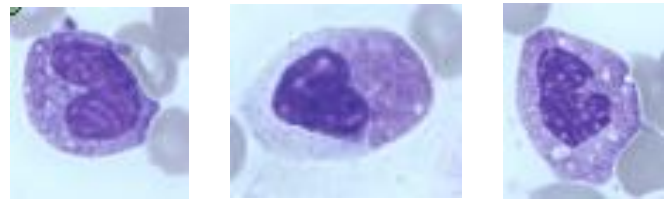
Case Study Slide 1 Continued

Hyposegmented (Left Shift) Neutrophils



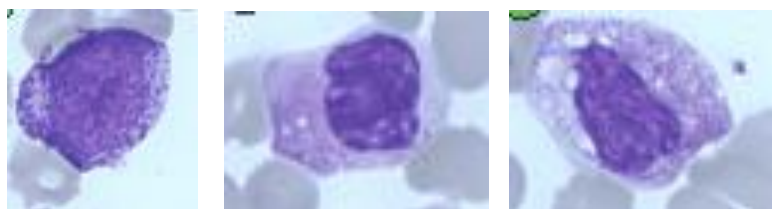
These cells show the specific granulation of mature neutrophils but the nucleus does the full segmentation of normal Neutrophil. Please also note the cytoplasmic vacuolation.

Metamyelocyte



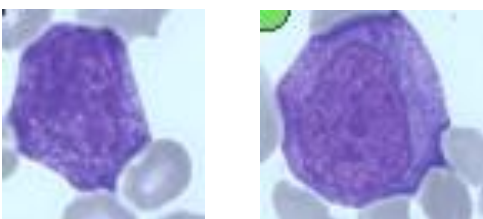
Slightly larger than a mature Neutrophil, indented nucleus, abundant specific granules rare azurophilic granules.

Myelocyte



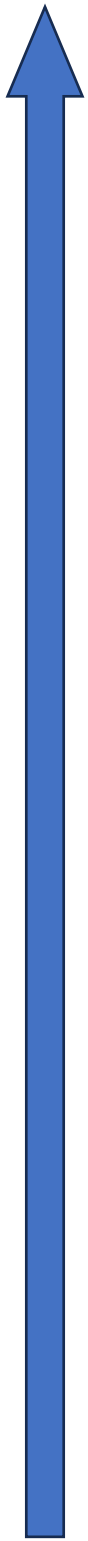
Similar size to Metamyelocyte, nucleus is round (no or little indentation) with no nucleolus, condensed chromatin. Has both specific granules and azurophilic granules.

Promyelocyte



Larger cell than any of the above and larger than Myeloblast. Nucleus has open chromatin with nucleoli may be present. Azurophilic granules only.

Mature



Immature

