

December Slides

Slide 1

See Review opposite.

Slide 2

Geriatrics unit.
Anemia, Anisocytosis(++).
Neutrophilia (Deganulated/agranulated neutrophils).
Myelemia (Degranulated immature granular cells).
Thrombocytopenia.
MDS/MPS?
Expert's comments:
Atypical CML?

Slide 3

Monomorphic hyperlymphocytosis associated with numerous smudge cells compatible with a lymphoproliferative syndrome (CLL type?).
The diagnostic approach must be completed by a request of blood lymphocyte immunophenotyping by flow cytometry, with establishment of the Matutes scoring and cytogenetic analysis.
Note the presence of macro-platelets (see giant platelets) as well as numerous platelet aggregates : DO NOT REPORT platelets result.
Add a comment e.g. : "underestimation of platelets count : PLT cluster".
Expert's comment:
Count "smudge" cells in lymphocyte count (if lymphocyte count to be reported by manual method).

Slide 4

Composite type major sickle cell syndrome (beta-thalassemia/hemoglobin S).

Slide 5

Recommendation: Platelets result to be checked on a citrate sample
Expert's comments:
"Difficult patient to sample?"

Slide 6

Presence of rare macroplatelets and rare platelet clusters.



This issue

December Slides **P.1**
Monthly Case Study **P.1-2**
Christmas Quiz **P.2-3**

Monthly Digital Case Study

December 2023 Slide 1

Presentation

Male 80 years old.
Deterioration of health state.
Hyperleukocytosis+ thrombocytopenia
Leucocyte differential with alarm

Additional information

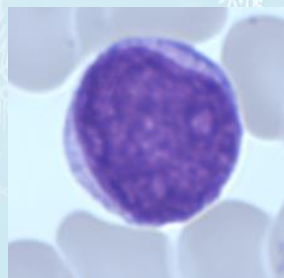
Highly degranulated / agranulated Neutrophil. Thrombocytopenia

Majority population of mostly granular blasts (estimated at 80% of leukocytes), in favour of Acute Myeloid Leukaemia

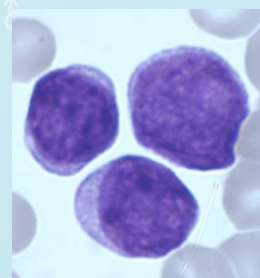
Expert's comment: AML probably AML 1/2.

FBC Results

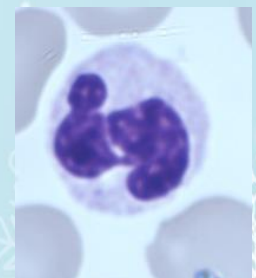
WBC	89.1 (10 ³ /mm ³)	Neutrophils	11.9 (%)
RBC	3.48 (10 ⁶ /mm ³)	Lymphocytes	1.5 (%)
HGB	11.9 (g/dL)	Monocytes	3.0 (%)
HCT	35.3* (%)	Eosinophils	-
MCV	102 (fL)	Basophils	- (%)
MCH	34.2 (pg)	Blasts	83.6 (%)
MCHC	33.7 (g/dL)		
PLT	46* (10 ³ /mm ³)		



Blast Cell



Blast Cells

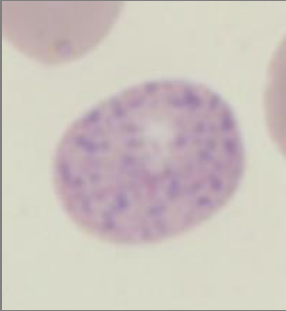


Agranular Neutrophil

Slide 1 Review Continued

Last month's quiz

What morphological features can be seen in the cell from a Romanowsky stained blood film?



- a) Heinz Bodies
- b) HbH
- c) Basophilic Stippling

Right answer:

- c) Basophilic Stippling

Basophilic stippling is a frequent manifestation of hematologic disease in the peripheral blood. Fine basophilic stippling is associated with increased red cell production and is commonly seen when there is increased polychromatophilia. Coarse basophilic stippling is seen in megaloblastic anaemia and other forms of severe anaemia's, lead poisoning, and thalassemia.

The term AML M1 or M2 relates to the French-American-British (FAB) groups classification of Acute Leukaemia's and Myelodysplastic Syndromes. The FAB classification was developed in the 1970's firstly as an aid to differentiate Acute Lymphoid from Acute Myeloid Leukaemia, classification is based solely on the cytochemical morphology of cells to elucidate their lineage and maturation. In the 1980's further development of the FAB classification sub divided the Acute Myeloid Leukaemia's into 8 categories based upon the morphological features of the cells:-

- M0 – AML with minimal evidence of differentiation
- M1 – Poorly differentiated no Myeloid maturation
- M2 – Myeloblastic with some Myeloid maturation
- M3 and M3v – Promyelocytic Leukaemia
- M4 – Acute Myelomonocytic leukaemia
- M5a and M5b – Monoblastic Leukaemia
- M6 – Erythroblastic Leukaemia
- M7 – Megakaryoblastic Leukaemia

With the development of techniques such as cytogenetics and immunophenotyping the World Health Organisation (WHO) proposed a new classification which was based on the genetic, immunophenotypic, biological and clinical features of patients to better define specific disease entities.

The WHO classification of AML (briefly)

AML with myelodysplastic syndrome, therapy related

AML with recurrent genetic abnormalities e.g. AML with t(8;21)(q22;q22), AML1(CBFA)-ETO fusion gene, Acute Promyelocytic Leukaemia (AML with t(15;17)(q22;q11-12) and PML-RARA fusion gene or variants with RARA.

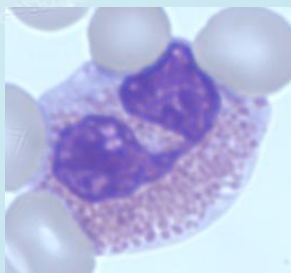
AML with multilineage myelodysplasia

AML Not Otherwise Categorized. in such cases the FAB classification is used.

Christmas Quiz

Let's see what we remember for the previous cell quiz questions and morphology articles.

- 1) What word describes changes in Red Blood Cell shape?
- 2) What cell can either be T or B?
- 3) Can you identify this white cell?



QSP 2.0

Available as a single use license and a site license which allows up to 50 concurrent users. To find out more, [contact us](#).

Editorial Team

Kelly Duffy
Andrew Fisher

About us

HORIBA UK Limited
Kyoto Close
Moulton Park
Northampton, UK
NN3 6FL

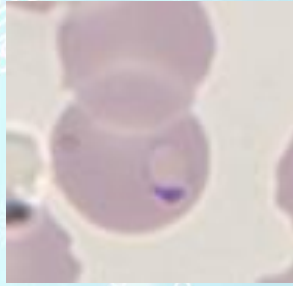
HORIBA Medical
Parc Euromédecine, 390
Rue du Caducée, 34790,
France

www.horiba.com/medical

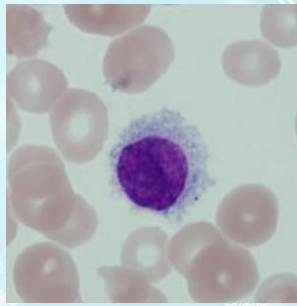


4) What Red cell inclusion may be “happy”?

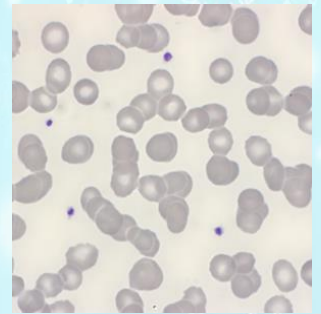
5) What feature can be seen in this red cell:



6) Can you identify this cell:



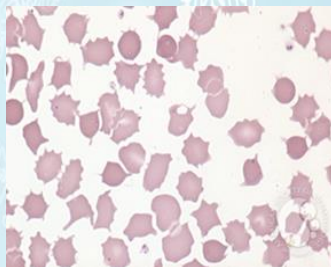
7) What feature is seen in this film?



8) Which of these feature may be seen in Neutrophils during infection?

- a) Neutrophil left shift
- b) Excess Granulation (Neutro-Toxic Granulation)
- c) Pappenheimer bodies

9) What term is used for the red cells in the picture below?



10) What cells name is the same as Mistletoe berries?

- a) Platelet
- b) Red Cell
- c) White cell

*Wishing you a Merry Christmas
and a Happy New Year*