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January Slides

Slide 1

Onco-haematology unit. Lymphocytosis+ "abnormal lymphocytes" flag on the analyser. Rather monomorphic hyperlymphocytosis associated with some "smudge" cells. To be considered with the clinical assessment and the results of blood lymphocyte immunophenotyping by flow cytometry (Matutes scoring).

Expert's comment:

"NHL": Marginal Zone Lymphoma?

Slide 2

Nothing to report

Slide 3

Nothing to report

Slide 4

See case study opposite

Slide 5

Intensive care unit. Thrombocytopenia. Neutrophilia. Presence of macroplatelets. Expert's comment: Hypergranulated (++) and vacuolated (++) neutrophils: => In favour of septic shock.

Slide 6

Nothing to report

Monthly Digital Case Study Presentation January 2024, Slide 4

FBC Results

WBC 147.22* ($10^3/\text{mm}^3$)

RBC 2.08* ($10^6/\text{mm}^3$)

HGB 6.6* (g/dL)

HCT 19.2* (%)

MCV 92 (fL)

MCH 31.7 (pg)

MCHC 34.4 (g/dL)

PLT 63 ($10^3/\text{mm}^3$)

Neutrophils 0.7%

Lymphocytes 2.1%

Blasts 96.5%

Clinical Details

Emergency? AML

Slide Information

Anaemia.

Aniso-poikilocytoses (echinocytes++).

Neutropenia. Thrombocytopenia.

Hyperleucocytic blastosis.

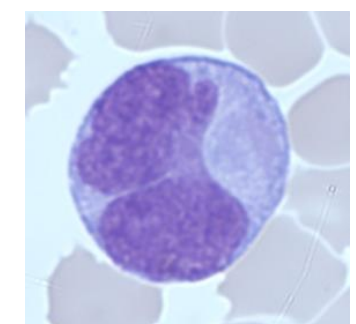
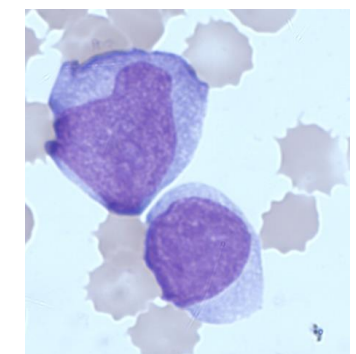
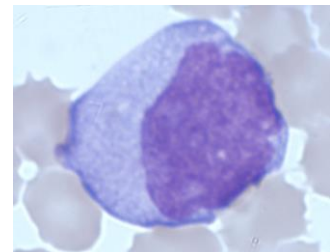
Large blasts with often "bissac" nuclei.

Rarely granulated blasts (no Auer bodies seen).

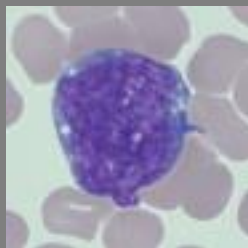
Expert's comments:

AML M5a? NPM1 mutation? Check the platelet count by manual method.

Selection of Blast cells



Can you name the cell below?



AML M5a Quick Overview

AML M5 (Acute monocytic/monoblastic leukaemia) is subclassified as either M5a or M5b depending upon the degree of monocytic maturation. M5a (Acute Monoblastic Leukaemia) is characterised by having >80% monoblasts of the monocytic element, whereas M5b (acute monocytic leukaemia) is where there is <80% monoblasts of the monocytic element. Monoblasts can be defined as large cells (20-30 μm), with round/oval nuclear shape, prominent nucleolus, basophilic cytoplasm with some fine azurophilic granules. The nucleophosmin (NPM1) mutation is the most common genetic lesion in adult acute leukaemia (present in about 1/3rd of all cases). The presence of the NPM1 Mutation and the absence of the FLT3 ITD mutation has been shown to be a favourable prognostic indicator.

December Quiz Answers

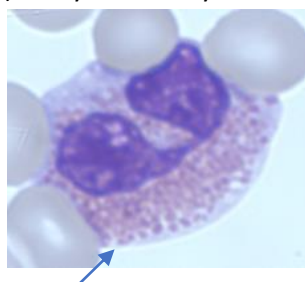
1) What word describes changes in Red Blood Cell shape?

Answer: Poikilocytosis

2) What cell can either be T or B

Answer: Lymphocyte

3) Can you identify this white cell?

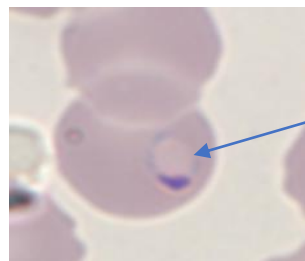


Answer: Eosinophil

4) What Red cell inclusion may be "happy"?

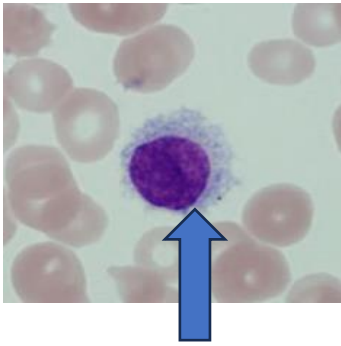
Answer: Howel JOLLY body

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



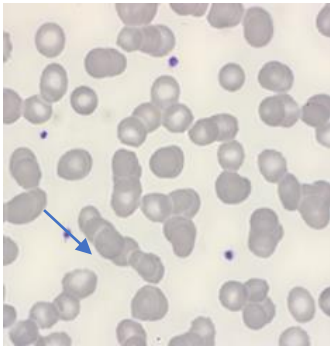
Answer: Plasmodium Falciparum Trophozoite

6) Can you identify this cell?



Answer: Hairy cell

7) What feature is seen in this film?



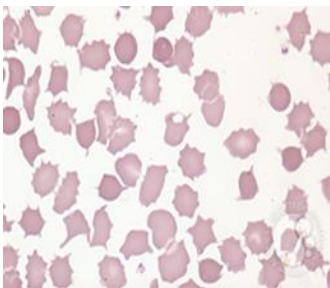
Answer: Rouleaux

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

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

Answer: Neutrophil Left Shift, Excess Granulation (Neuro-Toxic Granulation)

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



Answer: Acanthocytosis

10) What cell's name is the same as Mistletoe berries?

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

Answer: White cell

Bibliography

Blood Cells a Practical Guide, Barabara Bain

[How I diagnose and treat NPM1 – mutated AML](#)

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