

July Slides

Slide 1

Microcytic anemia

Slide 2

Anemia, thrombocytopenia

Slide 3

See case study opposite

Slide4

Evolving CLL

Slide 5

Neutrophilia.
Microcytic
anisocytosis(+++).
Poikilocytosis(++).
Ovalocytes/elliptocytes(++).
Dacryocytes(++).
RBC fragments.
Hypochromia(++).

Expert comments:
In favor of MDS.
Sideroblastic anemia?

Slide 6

Neutrophilia,
Thrombocytosis,
Discrete myelma, discreet
erythroblastosis



This issue

July Slides **P.1**
Monthly Digital Case Study **P.1-2**

Monthly Digital Case Study Presentation July 2024, Slide 3

FBC Results

WBC 32.5* ($10^3/\text{mm}^3$)
RBC 3.55 ($10^6/\text{mm}^3$)
HGB 10.6 (g/dL)
HCT 30.8 (%)
MCV 86.8 (fL)
MCH 30.0 (pg)
MCHC 34.5 (g/dL)
PLT 88* ($10^3/\text{mm}^3$)
Large Platelets 2

Neutrophils 61.1%
Lymphocytes 7.6%
Monocytes -
Eosinophils 0.8%
Blasts 17.6%
Myelocytes 7.6%
Metamyelocytes 5.3%
Erythroblasts 3

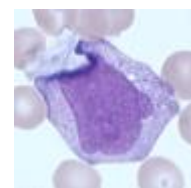
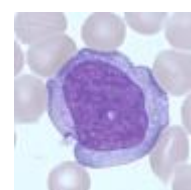
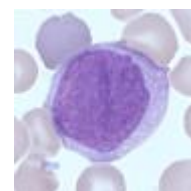
Clinical Details

Male age 63, Emergency Unit

Slide Information

Thrombocytopenia.
Leukocytosis.
Neutrophilia.
Monocytosis: Monocytes/promonocytes/monoblasts?
Search for acute leukemia.

Neutrophils sometimes degranulated.
Myeloma+erythroblastosis.
Promonocytes(++).
Presence of macroplatelets.
For the attention of the expert: AML (4/5)?



Bibliography

Morphological evaluation of monocytes and their precursors

Haematologica. 2009 Jul; 94(7): 994–997.

Slide Information Continued

In the context of AML with a monocytic component, should promonocytes always be classified with (mono) blasts: WHO criteria.

Blastosis estimated in this case at 5 G/L (15% of leukocytes).

Expert comment:

Appearance compatible with (monoblastic) AML5

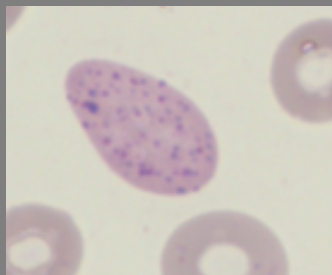
Monoblast or Promonocyte?

In the paper ‘Morphological evaluation of monocytes and their precursors’ published 2009 in the journal *Hematologica*, a guide to identify the monocyte subtypes was presented. The article separated monocyte into 4 types, Monoblast (the precursor cell), Promonocyte, Immature Monocyte and Monocyte, with the following characteristics.

Cell	Nuclear Shape	Chromatin	Cytoplasm	Comments
Monoblast	Round/ Oval	Delicate/ lace like. Nucleolus prominent	Basophilic. Rare azurophilic granule	Large 20 – 40 um
Promonocyte	<u>Convoluted</u> <u>/indented</u>	Delicate/ lace like. Nucleolus prominent	Variably basophilic. Variable azurophilic granules	Except for nuclear shape, very similar to monoblast
Immature Monocyte	Convoluted/ indented	More condensed, Rare nucleolus	Less basophilic than promonocyte or blast but more basophilic than mature monocyte	Resemble monocyte but less mature and smaller
Monocyte	Lobulated/ Indented	Condensed no visible nucleolus	Gray. Occasional azurophilic granules. Occasional vacuole	Large 20 – 25 um

Using the above table, we can identify the following cells in the slide.

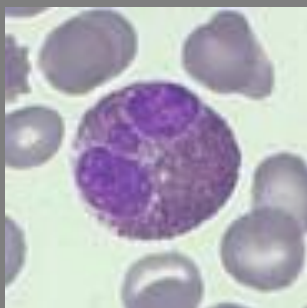
Cell Quiz



Slide 5 is querying Sideroblastic anemia. Is the cell above a ring sideroblast and if not why not?

Last Month's Quiz

Name the cell below.



Answer:
A normal Eosinophil

Editorial Team

Kelly Duffy
Andrew Fisher

About us

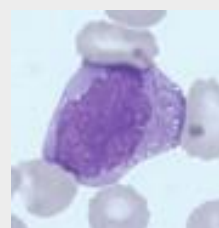
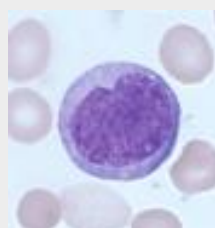
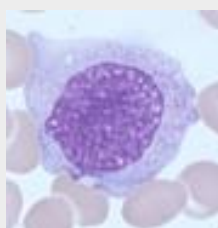
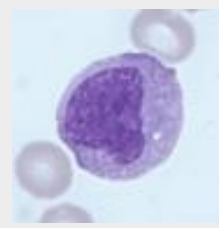
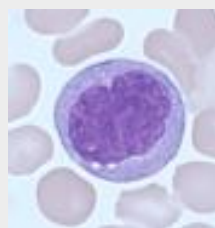
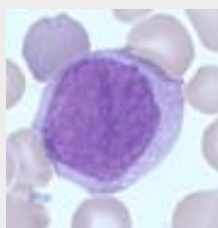
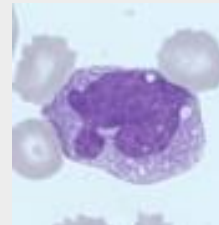
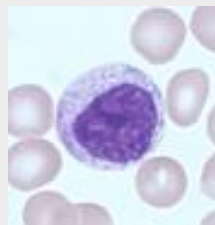
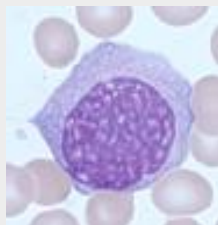
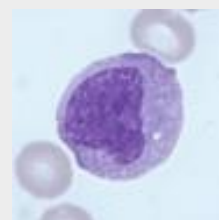
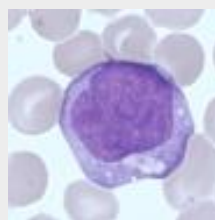
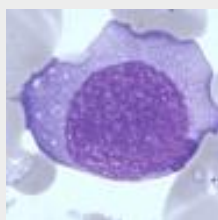
HORIBA UK Limited
Kyoto Close
Moulton Park
Northampton, UK
NN3 6FL

HORIBA ABX SAS
Parc Euromédecine, Rue du
Caducée, BP 7290, 34184
Montpellier Cedex 4, France
www.horiba.com/medical

Monoblast

Promonocyte

Monocyte
(different slide)



It is important to be able to differentiate between Promonocytes and immature/mature monocytes as in the WHO classification, Promonocytes are included with Monoblasts.

WHO Classification of Acute Myelomonocytic and Acute Monocytic Leukemia

Acute Myelomonocytic Leukemia	≥ 20% monocytes and their precursors
Acute Monocytic Leukemia	≥ 80% monocytes and/or their precursors (monoblasts and/or promonocytes)

Important Announcement Regarding QSP Newsletter

As some of you may already know, Quality Slide Program (QSP) is scheduled to be discontinued at the end of this year. Therefore, this month's issue will be the final edition. Starting in October, we will introduce a new name for the newsletter and continue to provide educational content focused on cell morphology. We plan to incorporate feedback from our subscribers' surveys into the content.

We would like to express our heartfelt gratitude to all of you who have been loyal readers of the QSP Newsletter over the past four years. We remain committed to delivering valuable information in the future.

QSP Newsletter Editorials