

Last Month's Slides

Slide 1

See Case Study

Slide 2

Nothing to report

Slide 3

Leukocytosis. Neutrophilia (hypossegmented, degranulated and highly vacuolated neutrophils). Myelemia (Immature Granular cells degranulated). Blastosis. Expert's comments: AML post MDS probable. Difficult +++ for the cellular differential. Do not hesitate to reclassify "atypical" cells as blasts. Significant dysgranulopoiesis

Slide 4

Nothing to report

Slide 5

Nothing to report

Slide 6

Nothing to report



This issue

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 Monthly Digital Case Study [P.1-2](#)
 Cell Quiz [P.2](#)
 Previous 12 Months' Issues [P.3](#)

Monthly Digital Case Study

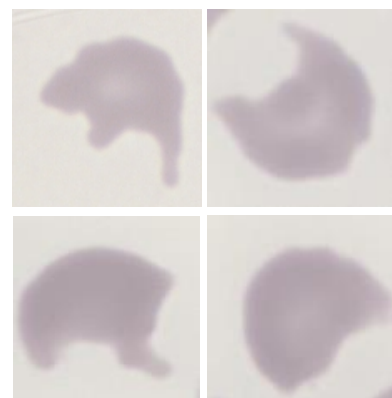
May 2022 Slide 1

Presentation

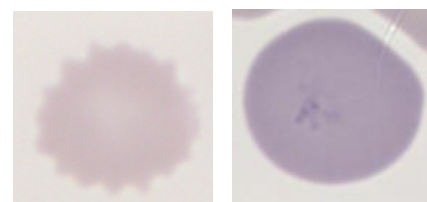
Haematology clinic patient.
 Clinical haematology unit.
 Deterioration of general condition.
 Myelemia.
 Reticulocytosis.

FBC Results

WBC 27.0 * ($10^3/\text{mm}^3$)
 RBC 2.4* ($10^6/\text{mm}^3$)
 HGB 7.5* (g/dL)
 HCT 23.9* (%)
 MCV 100(fL)
 MCH 31.2(pg)
 MCHC 31.3(g/dL)
 PLT 227($10^3/\text{mm}^3$)
 RDW-SD 80fL
 Reticulocytes 225 $\times 10^9/\text{L}$



Schistocytes



Echinocyte

Macrocytic
Polychromatic Cell

Slide review

Anisocytosis(RDWsda70fL).
 Microcytes(++).
 Macrocyte(++).
 Schistocytes(++).
 Echinocytes(++).
 Presence of Schistocytes.
 Check for Thrombotic Microangiopathy (TMA).

Cell Quiz:

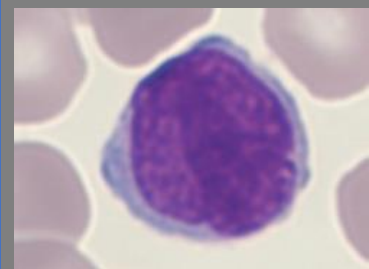


What term best describes the above neutrophil

- a) Hypersegmented
- b) Hypogranular
- c) Pelger Huet form

Last Month's Cell Quiz:

An elderly patient presents with extensive red rash (erythroderma), enlarged spleen and lymph nodes. Blood film shows numbers of abnormal lymphocytes like the one above. What condition may be present?



- a) Glandular Fever
- b) Sezary Syndrome
- c) Allergic reaction

Answer:

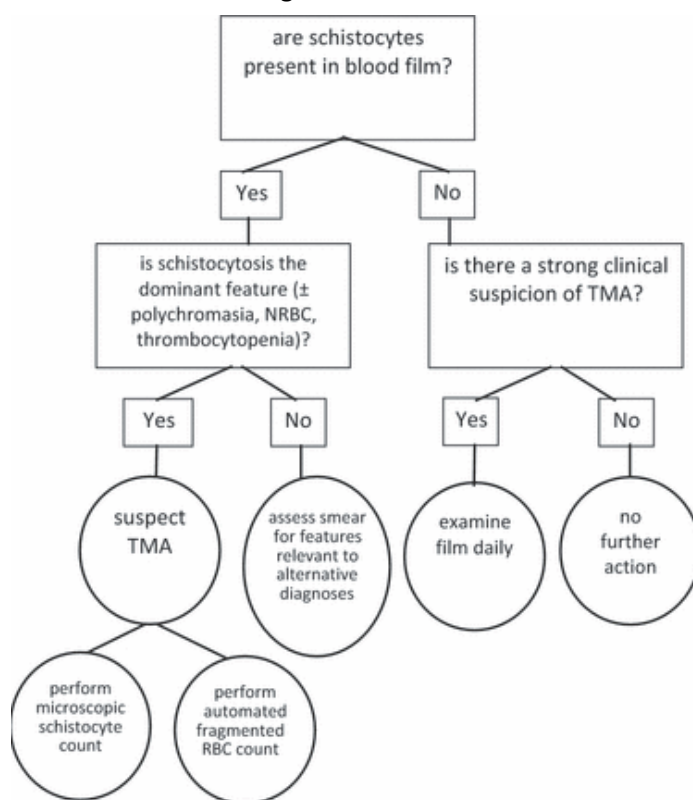
b) Sezary Syndrome. Sezary Syndrome is a rare aggressive form of cutaneous T cell Lymphoma with patients often presenting with a red severely itchy rash (erythroderma). Sezary Cells have a convoluted or cerebriform nucleus with tightly intertwined nuclear lobes.

Slide 1 Continued

Schistocytes or schizocytes (from the Greek word schisto, broken or cleft, corresponding verb schizo) are circulating fragments of red blood cells (RBC) or RBCs from which cytoplasmic fragments have been lost. Schistocytes are absent in the blood film of normal healthy individuals. Schistocytes are formed by extrinsic mechanical destruction caused by the passage of the TBC through fibrin strand. Fibrin strands are formed at the site of damage to a blood vessel and a clot begins to form.

Schistocytes are a very important prognostic marker for Thrombotic Macroangiopathic Anaemia (TMA) and if present in a blood film, further investigation must be performed, particularly if they are the dominant RBC morphological feature. In 2011, ICSH published guidelines on the identification, diagnostic value, and quantitation of schistocytes.

A suggested flow chart from the SCH guidelines is detailed below:



TMA includes 2 major syndromes: Thrombotic Thrombocytopenia Purpura* (TTP) and Haemolytic Uraemic Syndrome (HUS) Schistocytes may also be found in patients with malfunctioning prosthetic valves, HELLP syndrome, malignant hypertension, and metastatic cancer. RBC fragments similar to Schistocytes can also be found in genetic or acquired RBC disorders (RBC membrane defects, thalassaemia, megaloblastic anaemia, primary myelofibrosis, and burns).

Schistocytes can be classified as Keratocyte, helmet, or triangle. Microspherocytes are also part of the schistocyte family in TMA.

A schistocyte count should be performed on a well stained blood film with the number of schistocytes counted per 1000 RBC.

* For more information, please see QSP issue 9, January 2021.

The first issue of the QSP Newsletter was published in May 2020. To celebrate the 2nd anniversary we looked back to the last 12 issues:

Issue 25 | May 2022:

Case Study - Slide 3, 27% Erythroblasts, Target Cells, Howell Jolly Bodies.
Article - Malaria testing

Issue 24 | April 2022:

Case Study - Slide 2, High WBC, smudge cells - lymphoproliferative syndrome
Article - Malaria overview

Issue 23 | March 2022:

Case Study - Slide 2, Blast Cells indicative of AML
Article - Rare Lymphoid Clonal Abnormalities (hairy cell leukaemia, SLVL)

Issue 22 | February 2022:

Case Study - Slide 3, Atypical Lymphocytes - Infectious Mononucleosis
Article - An interesting case of Thrombocytopenia (May-Hegglin Anomaly)

Issue 21 | January 2022:

Case Study - Slide 5, Rouleaux formation
Article - Red Cell Morphology terminology part 2 - Variation in shape

Issue 20 | December 2021:

Case Study - Slide 6, Vacuolated and hypergranular Neutrophils Septic Shock
Article - Red Cell Morphology Part 1 – variation in size and colour

Issue 19 | November 2021:

Case Study - Slide 3, High WBC, RBC target cells, Howell Jolly Body, Cabot's Ring
Article - Monocytes

Issue 18 | October 2021:

Case Study – Slide 2, Low Platelet count due to Platelet aggregation
Article - Platelet aggregation detection on HORIBA Yumizen H1500/H2500, Eosinophils

Issue 17 | September 2021:

Case Study - Slide 2, Neutrophilia, Anisocytosis
Article – Basophils

Issue 16 | August 2021:

Case Study - Slide 1, Burkitt's Lymphoma
Article – Granulocyte Development

Issue 15 | July 2021:

Case Study - Slide 3, Lymphoproliferative Sezary Syndrome
Article - Paroxysmal Nocturnal Haemoglobinuria

Issue 14 | June 2021:

Case Study - Slide 1, target cells, spherocytes
Article - Platelets and counting methodology

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Bibliography

[ICSH](#)

[recommendations for identification, diagnostic value, and quantitation of schistocytes](#)

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

