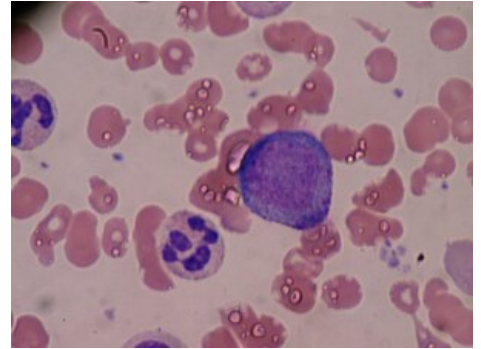


Promyelocyte

Promyelocyte is another stage of granulopoiesis after myeloblast. Its nucleus is still **round** with finechromatin and well visible **nucleoli**, but it is already beginning to **flatten**. The cytoplasm is still **basophilic**, it contains a proteosynthetic apparatus and so it is a stage that can still undergo **mitosis**. In the area of the flattened nucleus, the so-called cytocentrum is already visible on well-stained slides as a **lighter spot**. We can distinguish between two types of promyelocytes:

- **1. grade**, where Golgiho body forms non-specific granules surrounded by a membrane, stainable with azure. These **azurophilic granules** are essentially lysosomes – containing lysosomal enzymes and myeloperoxidase.
- **2. grade**, whose Golgi body release first **specific granules** and thus it is already possible to determine whether the cell will **specialize** to become basophil, eosinophil or neutrophil.



Promyelocyte in bone marrow smear

Promyelocyte is the **only** stage of granulopoiesis in which **azurophilic granules** are formed. Therefore, their amount in the cytoplasm decreases with each cell division.

Links

Related articles

- Hematopoiesis (histology)

Literature used

- LÜLLMANN, Renate – RAUCH, . *Histologie*. 1. edition. Praha : Grada, 2012. ISBN 978-80-247-3729-4.
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