

# Hemolytic anaemia

The **cause** is the **breakdown of erythrocytes** (hemolysis – intra- or extravascular). **characters:**

- general **signs Hemolysis**,
- noticeable **hypercellularity of bone marrow** (it fills all the marrow spaces - even places where the marrow is fatty in an adult),
- **change** normal **ratio of granulo- and erythropoiesis** (3:1) **in favor of erythropoiesis**,
- sometimes we also encounter **extramedullary hematopoiesis** (liver, spleen) - erythrocyte production increases up to eight times (there are numerous reticulocytes in the blood, but the lifespan of such erythrocytes is significantly reduced - only for 15 days) - **compensated anemia**, the number of erythrocytes is, however, very sensitive to the reduction of erythrocyte production (e.g. by a common infectious disease) - then a so-called *aplastic crisis* occurs,
- extravascular hemolysis is characterized by a *hemosiderosis of macrophages*, some of which accumulate lipids from disintegrated erythrocytes and thus resemble lipophages in Gaucher's disease - the so-called gaucheroid cells.<sup>[1]</sup>

## Division

### Hemolytic anemia corpuscular

- mostly congenital
- **erythrocyte membrane disorders**: hereditary spherocytosis, elliptocytosis, paroxysmal nocturnal hemoglobinuria (acquired disease);
- **erythrocyte metabolism disorders**: enzyme defects pentose cycle (glucose-6-phosphate dehydrogenase deficiency, glutathione reductase), enzyme defects Embden -Meyerhof cycle (hexokinase defect, pyruvate kinase deficiency);
- **hemoglobinopathy**: thalassemia, sickle cell anemia.

### Hemolytic anemia extracorporeal

- **damage by physical and toxic influences** (mechanical, thermal, bacterial toxins, malaria);
- **antibody damage**: autoantibodies, anti-Rh-factor antibodies (fetal erythroblastosis), isoagglutinins (post-transfusion hemolytic reactions).<sup>[2]</sup>

## Links

### Related articles

- Anemia • Anemia (pediatrics)

### Reference

1. PASTOR, Jan. *Langenbeck's medical web page* [online]. [cit. 12.4.2010]. <<http://langenbeck.webs.com>>.
2. LEBL, J – JANDA, J – POHUNEK, P, et al. *Clinical pediatrics*. 1. edition. Galén, 2012. 698 pp. pp. 543. ISBN 978-80-7262-772-1.