

Bleeding conditions (pediatrics)

Classification of bleeding conditions

Bleeding conditions from blood clotting disorders

- Thrombocytopenia
 - **thrombocytopenia from reduced production,**
 - TAR syndrome,
 - Wiskott-Aldrich syndrome,
 - aplastic anemia,
 - cyanotic heart defects,
 - drug-induced thrombocytopenia (antiepileptics – valproate, cytostatics, heparin,...),
 - **thrombocytopenia from increased destruction,**
 - neonatal alloimmune thrombocytopenic purpura (NATP),
 - newborns of mothers with autoimmune thrombocytopenic purpura (autoantibodies can cross the placenta),
 - acute autoimmune (idiopathic) thrombocytopenic purpura (ITP),
 - chronic autoimmune thrombocytopenic purpura,
 - thrombotic thrombocytopenic purpura (TTP),
- thrombocytopathy – prolonged bleeding with a normal platelet count,
 - **congenital coagulopathy,**
 - hemophilia,
 - von Willebrand disease,
 - **acquired coagulopathy,**
 - vitamin K deficiency coagulopathy in a newborn,
 - disseminated intravascular coagulation^[1].

Bleeding conditions from vascular disorders

Bleeding conditions characterized by a hemostasis disorder at the site of damage to small vessels without disorders of the coagulation system.

- **congenital disorders of the vascular wall,**
 - hereditary hemorrhagic telangiectasia (Rendu-Osler-Weber disease),
 - ataxia telangiectasia,
- acquired vascular wall disorders – **vasculitis,**
 - Henoch-Schönlein purpura,
 - Kawasaki disease,
 - Polyarteritis nodosa,
 - Wegener's granulomatosis,
 - secondary vasculitis (in SLE, in infections, in scurvy)^[1].

Differential diagnosis of clinical manifestations of hemorrhagic diatheses

coagulopathy

- deep localization → bleeding into muscles, joints,
- bleeding is delayed/protracted,
- it returns even after a few hours, it cannot be easily stopped by local compression,
- the scope is more about isolated manifestations.

thrombocytopenia /thrombocytopathy

- surface localization → petechiae (they are in niveau), suffusion, bleeding from mucous membranes,
- bleeding is immediate,
- compression can be easily stopped,
- the range usually involves multiple manifestations.

vasculopathy

- bleeding with a character similar to thrombocytopenia / -pathies,
- often symmetrical distribution,
- can come in waves,
- on the skin at the same time exanthems, edemas, possibly necrosis,
- petechiae are palpable = above niveau skin.^[2]

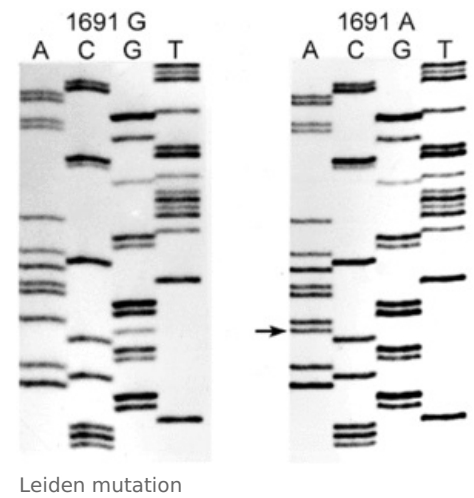
Differential diagnosis of thrombophilic conditions

congenital thrombophilic conditions

- AT III deficiency,
- protein C deficiency,
- protein S deficiency,
- resistance to activated protein C (= disorder of binding of protein C to f. V, the so-called Leiden mutation, which occurs in up to 5% of the population).

acquired thrombophilic states

- vascular catheters,
- vasculitis,
- diabetes mellitus,
- hyperhomocysteinemia,
- dehydration ,
- hyperviscosity: polycythemia, extreme leukocytosis,
- thrombocytosis,
- hyperlipidemia,
- malignancy,
- p.o. contraception,
- nephrotic syndrome,
- HUS,
- antiphospholipid syndrome^[2]



Links

Reference

1. BENEŠ, Jiří. *Studijní materiály* [online]. [cit. 2011]. <<http://jirben.wz.cz>>.
2. HAVRÁNEK, Jiří: *Hematologie - obecný úvod*. (upraveno).

related articles

- Hemostasis disorders: Hereditary coagulopathy • Acquired coagulopathy • Hemorrhagic diatheses (pathology)
 - Thrombocytopathy
- Hemostasis • Haemocoagulation • Examination of blood coagulation • Examination of bleeding