

Hemostatic agents

Hemostatic agents are drugs that promote hemostasis in excessive bleeding. According to the place where they interfere with the process of hemostasis, we divide them into:

- vasoconstrictive,
- antiplatelet (platelet aggregation inhibitors),
- anticoagulants,
- fibrinolytic (thrombolytic).

Vasoconstrictive phase

We use **vasopressin** (ADH) derivatives and **α -mimetics** to artificially constrict the vessel and reduce its flow (or to completely stop blood flow).

Platelet phase

We use **etamsylate** to facilitate the adhesion and formation of the primary plug.

Coagulation phase

For local effect

The clotting sponge contains fibrinogen and thrombin on the surface. After activation by endogenous coagulation factors, a fibrin network is formed and the sponge undergoes complete degeneration.

For general effect

Coagulation factors

Most often as a substitution for genetic diseases - Hemophilia A - **factor VIII**, Hemophilia B - **factor IX**. Both can be replaced with fresh plasma or factor concentrates.

K-dependent factors II, VII, IX, X are used in case of overdose by oral anticoagulants (Warfarin), liver diseases, broad-spectrum ATB treatment. The so-called PIVKA (= proteins induced in vitamin K absence) is created.

Vitamin K

For more information see *Vitamin K*

It occurs naturally in plants, in the human body, it is formed by saprophytic bacteria in the intestine. K-dependent coagulation factors - II, VII, IX, X.

Indication:

- prevention or treatment of bleeding,
- prevention of neonatal hemorrhage,
- excessive use of oral anticoagulants,
- sprue, celiac disease, steatorrhea, absence of bile in the duodenum (obstructive icterus/jaundice).

Protamin sulfate

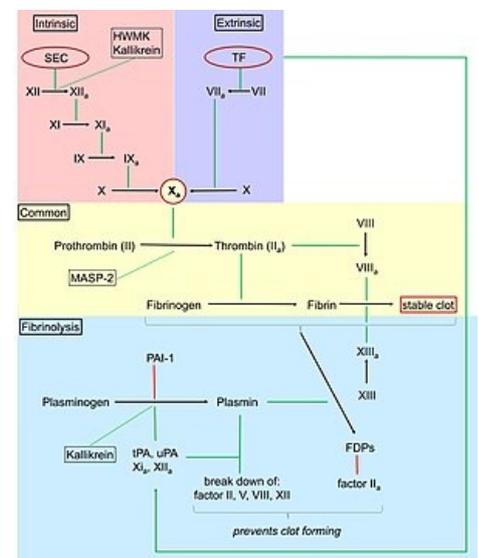
Protein, heparin antagonist (forms irreversible complexes with heparin). Its dose depends on residual heparin level in the body because protamine sulfate has an anticoagulant effect at higher doses.

Phases of fibrinolysis

Antifibrinolytics work as:

- Inhibitors of plasminogen activators - **tranexamic acid, aminocaproic acid,**
- direct inhibitors of plasmin - **aprotinin.**

References



Clotting pathway

Related articles

- Hemostasis
- Coagulopathy
- Hemophilia disorders
-

Source

- MARTÍNKOVÁ, Jiřina. *Farmakologie pro studenty zdravotnických oborů*. 1. edition. 2007. ISBN 978-80-247-1356-4.