

The Management of Bleeding Disorders

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Three types of bleeding disorders can be differentiated by their clinical presentation:

1. **Coagulation defects:** large, diffuse hematomas.
2. **Thrombocytopenic or thrombopathic bleeding:** petechiae
3. **Vasculitic bleeding:** elevated confluent petechiae

The clinical manifestations of acute blood loss depend on the volume of the velocity of bleeding. Maximum tolerated acute blood loss: 2000 ml.

Priorities in the management of severe bleeding: 1. Replacement of blood volume. 2. Maintenance of hemostasis. 3. Optimizing oxygen transport capacity. 3. Avoidance of metabolic derailments. 5. Maintenance of colloid-osmotic pressure.

Complications of massive blood-transfusion: 1. Hypothermia, 2. Hypocalcemia, 3. Hyperkalemia, 4. Acidosis, 5. Thrombocytopenia, 6. Drop of coagulation factors.

Disseminated intravascular Coagulation (DIC) is promoted by: 1. long lasting shock, 2. Hypotension, 3. Extensive tissue damage, 4. Obstetric complications.

Hemoptoe is **massive** if the patient expectorates more than 600 ml of blood.

Bleeding problems in surgical patients: 1. Thrombocytopenia, 2. Liver disease, 3. Kidney diseases, 4. Dysfunction of platelets, 5. Drugs: Anticoagulation, Aspirin.

Risk of bleeding is: **small**, if no vital organs involved or accessible surgical field or small intervention. **Moderate**, if vital organs involved or deep and extended dissection. **High**, if bleeding would compromise surgical result.

How many platelets do we need to do safe surgery? Low risk surgery: > 50,000 per microliter; Moderate risk surgery: > 75,000 per microliter; high risk surgery: > 100,000 per microliter.

Preoperative management of anticoagulated patients: For elective surgery with low or moderate risk of bleeding, aim to INR < 2.5; for elective surgery with high risk of bleeding aim to INR 1.0.

Two units of fresh frozen plasma (FFP) will correct a therapeutic INR to within a level safe for surgery.