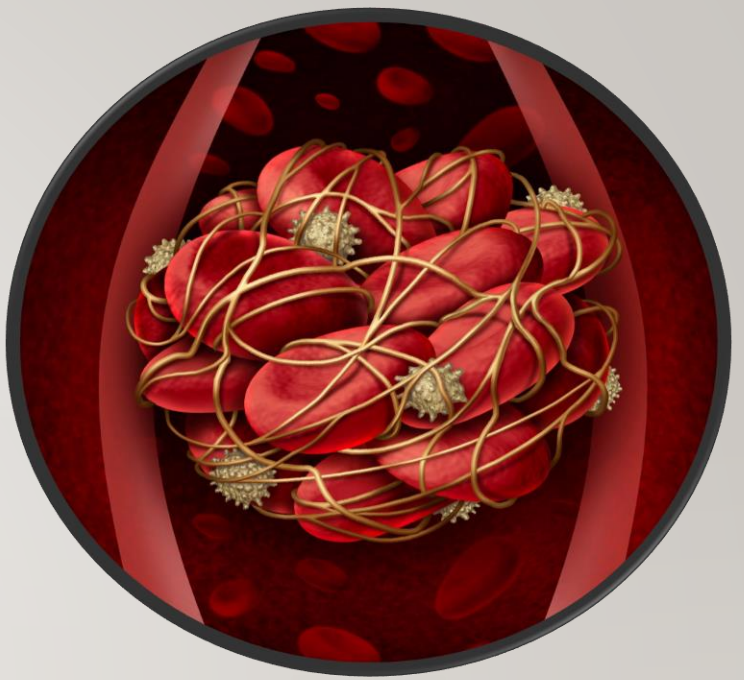
DISSEMINATED INTRAVASCULAR COAGULATION SYNDROME



CLASSIFICATION BY CLINICAL COURSE

ACUTE Acute DIC-syndrome develops suddenly within 24 hours

- DIC

SUBACUTE subacute DIC-syndrome lasts 1-3 weeks

- DIC

CHRONIK chronic DIC-syndrome lasts ore than 1 month

- DIC

ACUTE DIC-SYNDROME OCCURS AS A COMPLICATION OF THE FOLLOWING PATHOLOGIES:

- • OBSTETRICAL AGGRAVATIONS:
- - Premature separation of the placenta;
- - Fetal flat water embolism;
- - Rhesus incompatibility of mother and fetus;
- - Septic abortion;
- - Ectopic pregnancy;

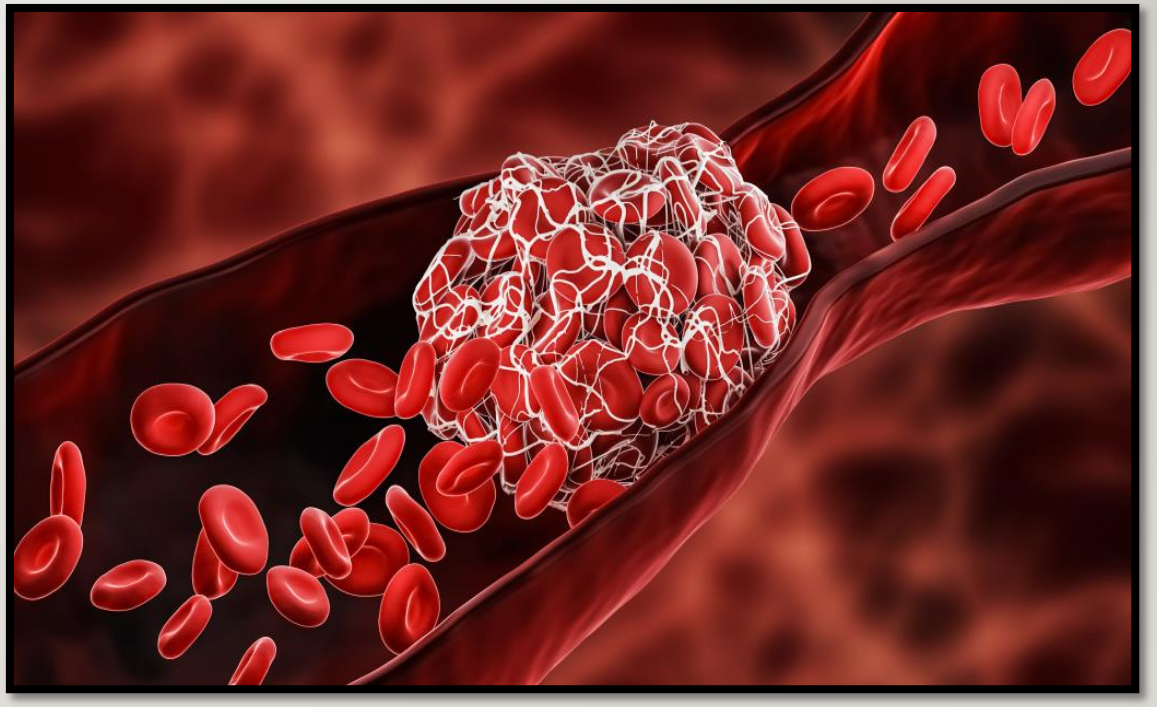
- • VASCULAR PATHOLOGIES
- - Aneurysm
- - Coarctation of the aorta
- - Congenital heart defects
- - Pulmonary artery thromboembolism
- - Surgical angioplasty, etc.

CAUSES OF ACUTE DIC-SYNDROME

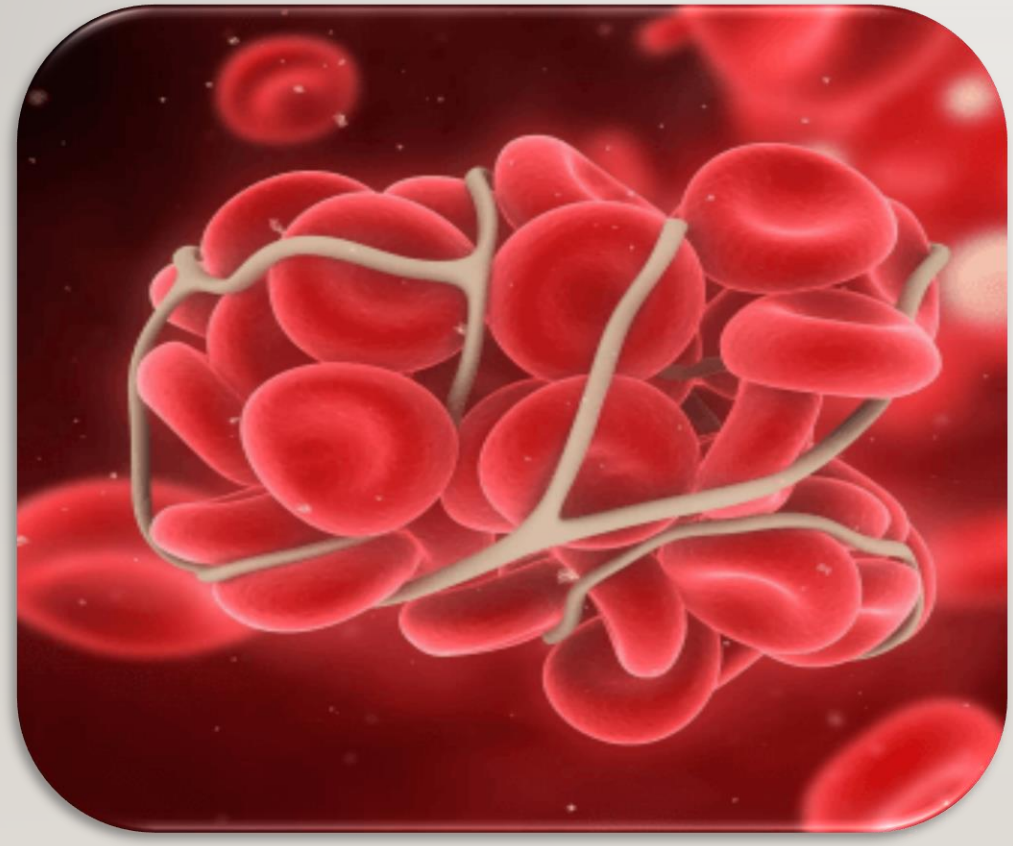
- • Sepsis
- • Shock (traumatic, hemorrhagic, septic, burn, anaphylactic)
- • Transfusion of incompatible blood
- • Crash syndrome, massive tissue damage during surgical operations
- • Acute intravascular hemolysis
- • Massive hemotransfusions

THE REASONS FOR THE DEVELOPMENT OF THE SEMI-ACUTE DIC-SYNDROME ARE:

- • Subacute glomerulonephritis
- • Hemorrhagic vasculitis
- • Immune complex vasculitis, etc.



CHRONIC DIC-SYNDROME CAN OCCUR AS A COMPLICATION OF THE FOLLOWING PATHOLOGIES:



- • Systemic urticaria
- • Tumor diseases (leukemia, cancer)
- • Dehydration of the body
- • Artificial prostheses of heart valves
- • Chronic hemolysis, etc.

STAGES OF DIC-SYNDROME

I

- Hypercoagulation, consumption coagulopathy and hypocoagulation stages are distinguished in the pathogenesis of DIC-syndrome.

II

- Wasting coagulopathy - when a large amount of thromboplastin enters the blood vessels, most of the coagulation factors of the blood plasma are consumed, and most of the fibrinogen is converted into fibrin.

III

- Hypocoagulation stage - bleeding occurs. Bleeding is caused by the increased consumption of platelets, coagulation factors and plasminogen.

LABORATORY DIAGNOSTICS OF DIC-SYNDROME

- Hypocoagulation stage

- • Blood clotting time ↓
- • Activated partial thromboplastin time ↓ (less than 45”
- • Ht ↑ (40 and ±)
- • Fibrinogen ↑
- • Plasma recalcification time ↑ (over 45”)
- • Thrombin time ↑(more than 10”)
- • Degradation products of fibrin ±
- • Soluble complexes of fibrin monomers ±
- • Tests: ethanol, protamine sulfate ±

LABORATORY DIAGNOSTICS OF DIC-SYNDROME

• Characteristic for wasting coagulopathy

- • Platelets ↓
- • Fibrinogen ↓
- • Antithrombin III ↓
- • Hypoproteinemia, hypoalbuminemia
- • Fibrin degradation products ↑
- • Activated partial thromboplastin time ↑ (≥ 65")
- • Plasma recalcification period ↑
- • Prothrombin and thrombin time ↑
- • Blood coagulation time, bleeding time and Ht either decrease or are in the lower and upper limits of normal

LABORATORY DIAGNOSTICS OF DIC-SYNDROME

- hypocoagulation stage

- • Blood clotting time, bleeding time ↑
- • Fibrinolytic activity ↑
- • Fibrinogen ↓
- • Hb ↓ Ht ↓
- • Erythrocytes ↓
- • Antithrombin III ↓
- • Coagulation factors I, II, IV, V, VIII, XIII ↓
- • Plasminogen ↓

Laboratory indicators	Norm	I stage	II stage	III stage
Platelet count (x109/l)	150-400	300	150	≤100
Coagulation time (min)	5-10	<4	10-20	12-20
Prothrombin time (seconds)	12-15	≤12	≥15	18-22
Activated partial thromboplastin time (seconds)	45-55	<40	50	>60
Thrombin time (sec)	18-20	<18	25-28	30-35
Fibrinogen (g/l)	2-4	2-3	<2	<1,5
Fibrin degradation products (mcg/ml)	0-10	≥20	≥15	20-25
D-dimer (mcg/ml)	<0,5	5-10	10-20	10-20