

Approach to a patient with Bleeding Disorders



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Case Scenario 1

- A 23 yr old boy requires a root canal for an abscessed tooth for which he was taking a painkiller. A day before the procedure he developed severe nose bleed which prompted his dentist to postpone the procedure and refer him to a physician for evaluation.



Case scenario 2

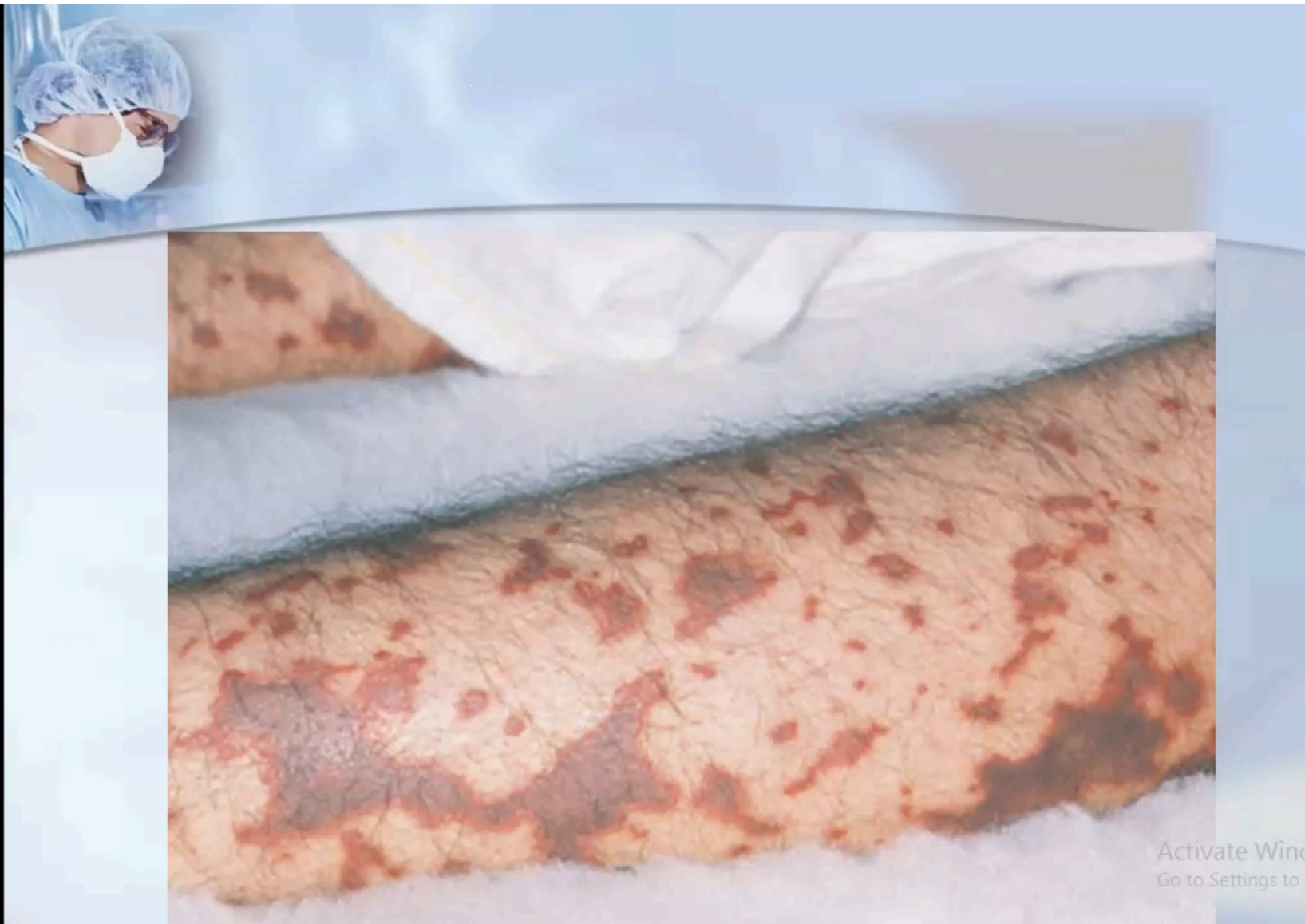
- A 12 years old boy presents with history of rash on his body. The patient also gives history of sore throat one week back. The rash is mainly on dependent parts of the body and is blanch-able. His spleen is not enlarged.





Case Scenario 3

- A 35 years old butcher presents in the ER dept with history of haematemesis. He also has multiple ecchymosis on skin. A day later he also develops severe epistaxis and haematuria.



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Ask About :

- Location of bleed
- Duration
- Precipitating cause
- Surgery
- Personal history
- Family history
- Systemic illnesses
- Drugs



Look For:

- Purpura
- Bruises
- Petechiae
- Gingival bleed
- Nose bleed
- Bleeding from superficial scratches
- Bleeding from tooth extraction sites
- Hemarthrosis
- Hematomas

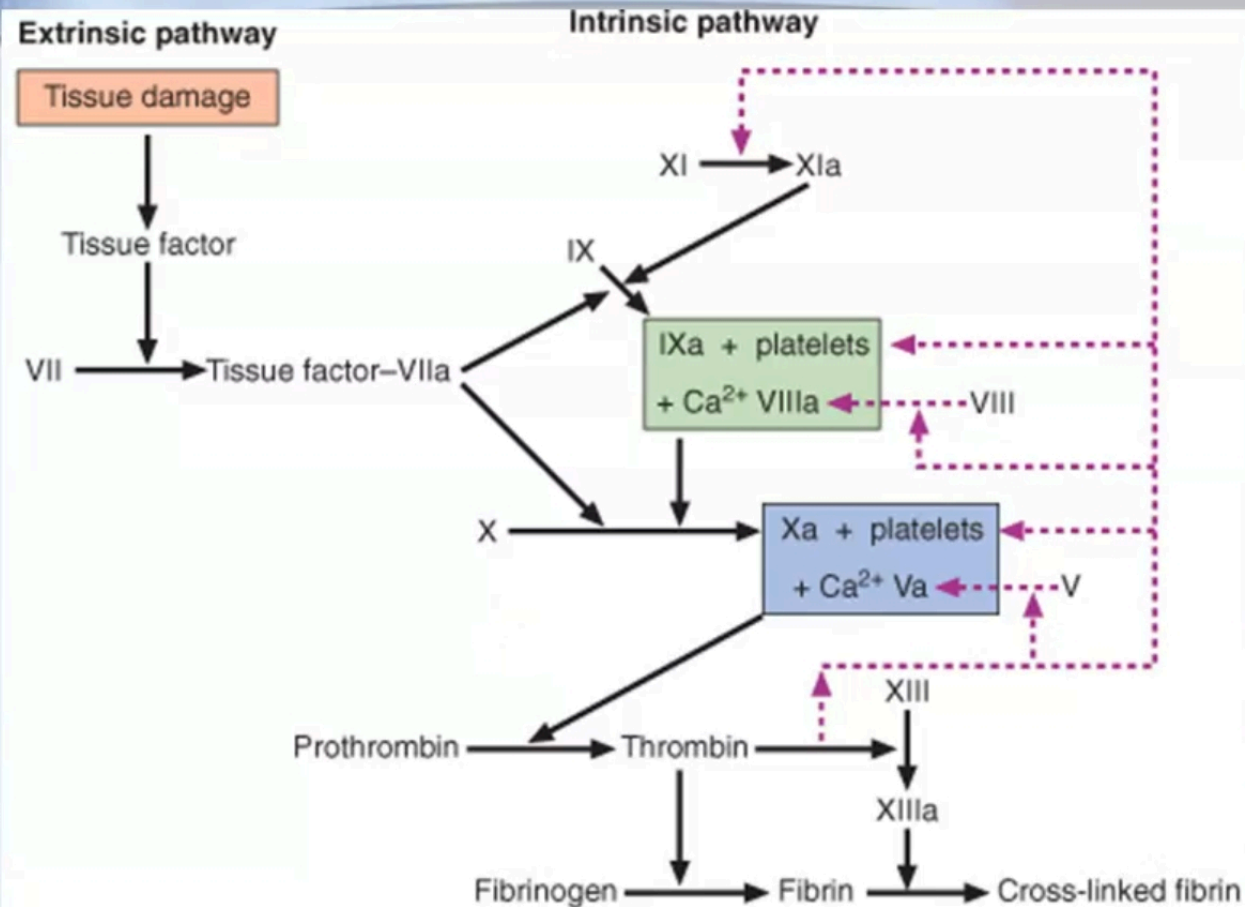


General concepts

Table 162-1 • CHARACTERISTIC PATTERNS OF BLEEDING IN SYSTEMIC DISORDERS OF HEMOSTASIS

TYPE OF DISORDER	SITES OF BLEEDING				ONSET OF BLEEDING	CLINICAL EXAMPLES
	General	Skin	Mucous Membranes	Others		
Platelet-vascular disorders	Superficial surfaces	Petechiae, ecchymoses	Common: oral, nasal, gastrointestinal, genitourinary	Rare	Spontaneous or immediately after trauma	Thrombocytopenia, functional platelet disorder, vascular fragility Disseminated intravascular coagulation, liver disease
Coagulation factor deficiency	Deep tissues	Hematomas	Rare	Common: joint, muscle, retroperitoneal	Delayed after trauma	Inherited coagulation factor deficiency, acquired inhibitor, anticoagulation Disseminated intravascular coagulation, liver disease

Coagulation Cascade



A person wearing a white surgical mask and a blue hairnet is looking at a large, curved screen. The screen displays a world map with a blue circle highlighting a specific location in the Pacific Ocean. The word "INVESTIGATIONS" is overlaid in the center of the screen.

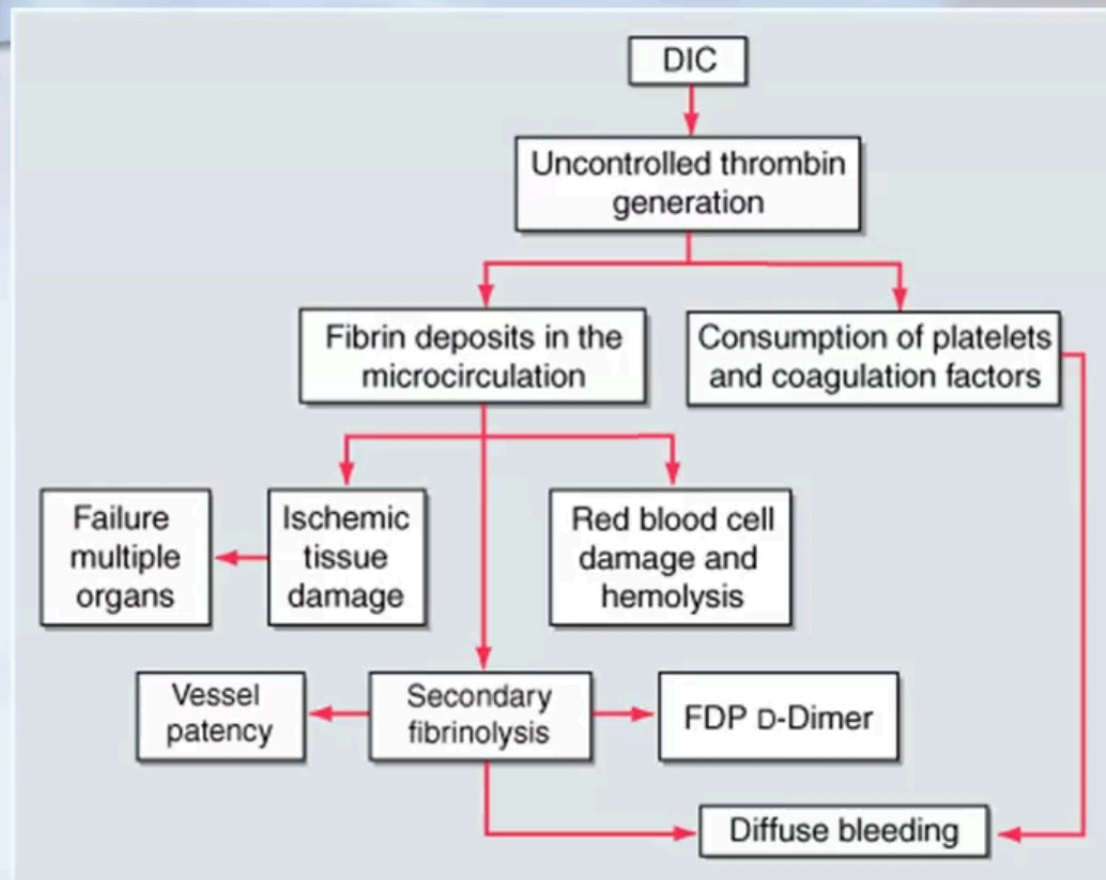
INVESTIGATIONS

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- CBC
- Peripheral film
- Bleeding Time
- Clotting Time
- PT
- APTT
- LFTs
- RFTs
- ANA
- DIC Profile
- FDPs
- D-dimers

DIC Cascade





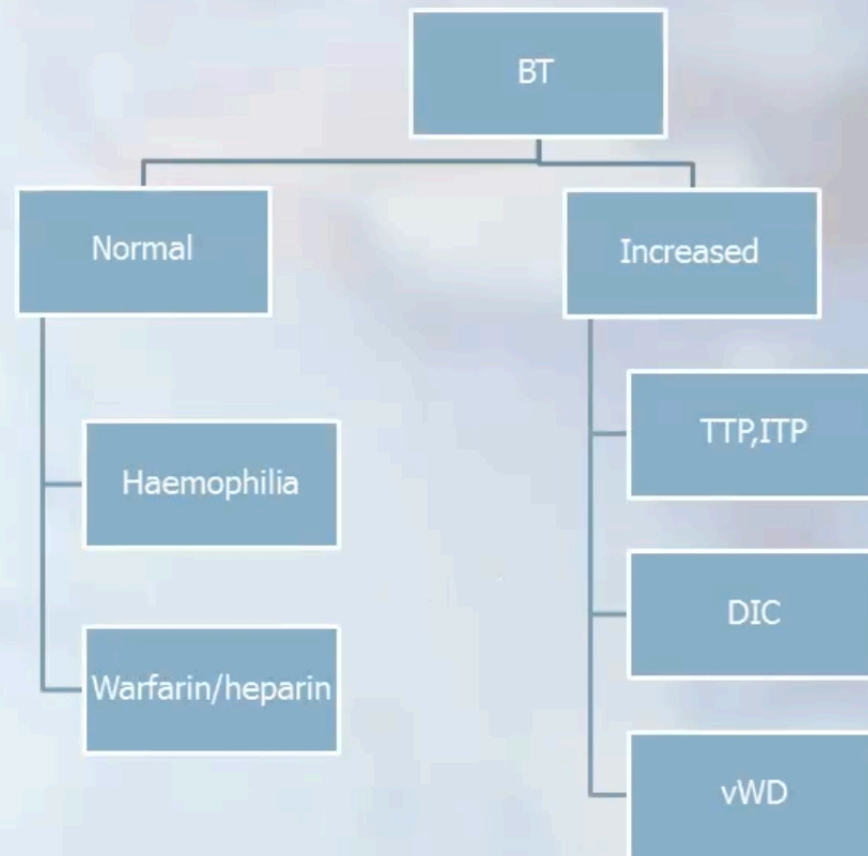
- Fibrinogen degradation products:
 - Congenital hypofibringenaemia
 - Disseminated intravascular coagulation
- D dimmers
 - Fibrinolysis
 - Disseminated intravascular coagulation



REACHING A CONCLUSION

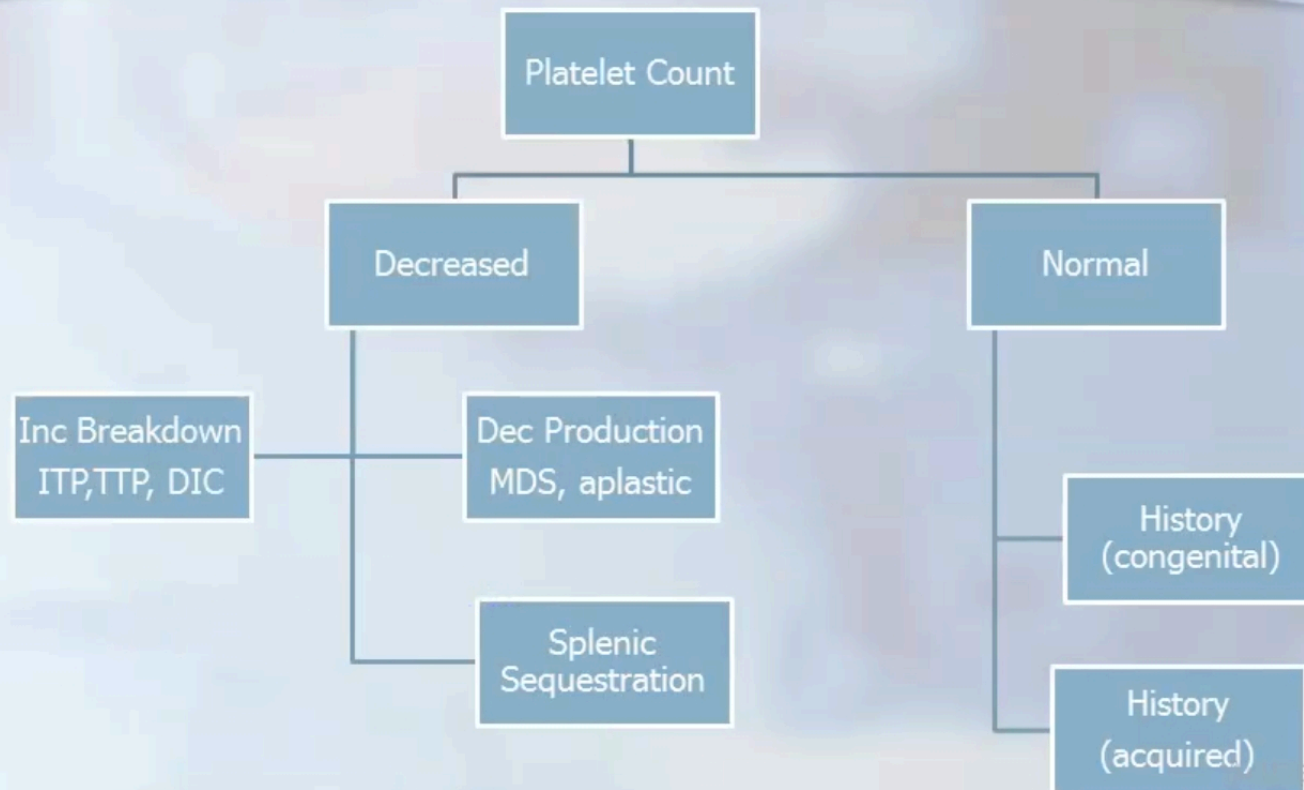
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Bleeding Time

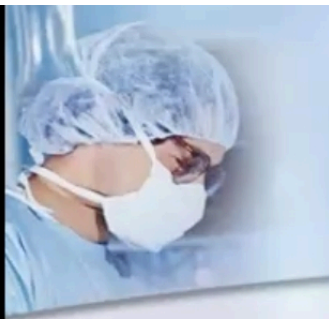


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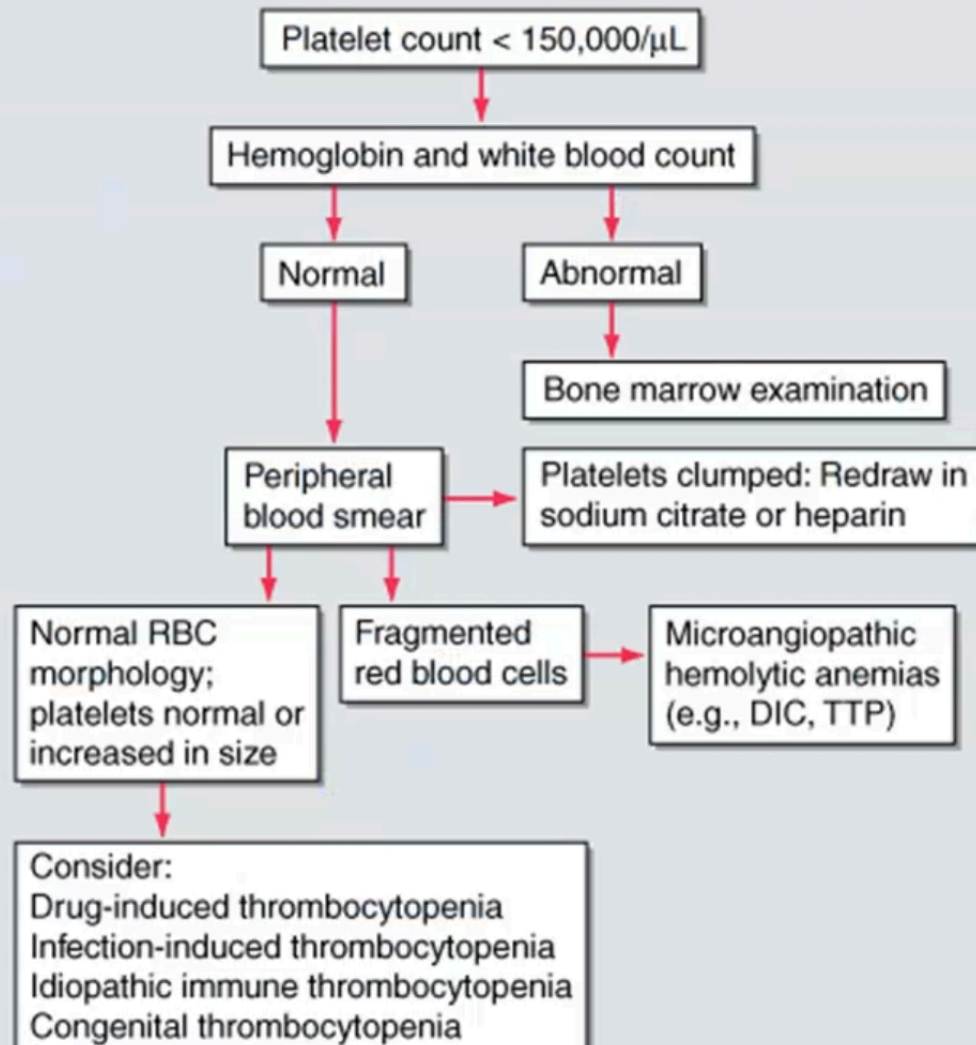
Platelet Disorders



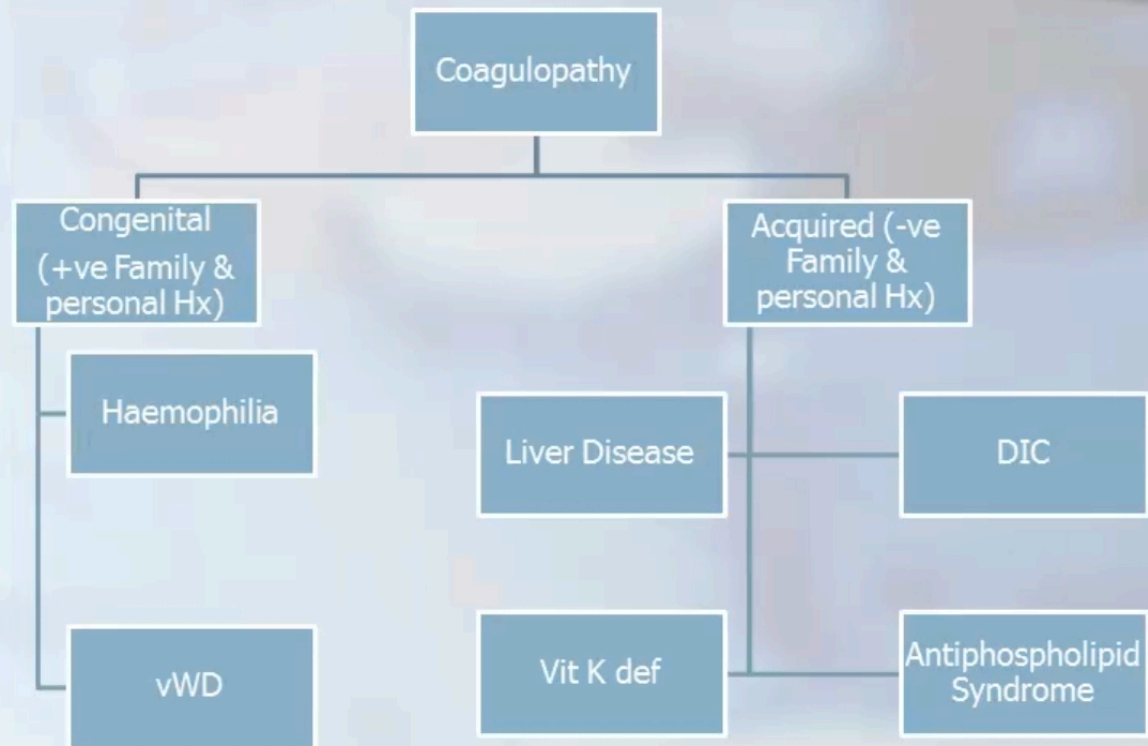
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ALGORITHM FOR THROMBOCYTOPENIA EVALUATION



Coagulopathy



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PT
Extrinsic pathway

APTT
Intrinsic pathway

Warfarin

Heprin

Liver disease

Haemophilia A & B

DIC

DIC

Primary fibrinolysis

vWD

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Disorders of Primary Haemostasis

- Platelet Functional disorders

- Acquired

- Drugs; NSAIDs, Uremia

- Congenital

- Bernard Soulier

- Glanzmann thrombasthenia

- Thrombocytopenia

- TTP/HUS

- ITP

- Senile purpura

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Table 177-5 • VASCULAR DISORDERS ASSOCIATED WITH BLEEDING

CONGENITAL

Hereditary hemorrhagic telangiectasia
Cavernous hemangioma
Connective tissue disorders
 Ehlers-Danlos syndrome
 Osteogenesis imperfecta
 Pseudoxanthoma elasticum

ACQUIRED DISORDERS AFFECTING VASCULAR HEMOSTATIC FUNCTION

Scurvy
Immunoglobulin disorders
 Cryoglobulinemia
 Benign hyperglobulinemia
 Waldenström's macroglobulinemia
 Multiple myeloma
 Henoch-Schönlein purpura
Glucocorticoid excess
 Cushing's syndrome
 Glucocorticoid therapy



Common Clotting Disorder


- Haemophilia A
 - Deficiency of Factor VIII
 - X-linked disease
 - Excessive bleeding, haemarthrosis
 - Factor VIII concentrates
- Haemophilia B
 - Christmas disease
 - Reduction of factor IX
 - Factor IX concentrates



- DIC
 - Consumptive coagulopathy
 - Commonly seen with sepsis, malignancy
 - Prolonged PT/APTT, low fibrinogen, Inc D-dimer levels
 - FFPs



- Von Willebrand Disease
 - Mild bleeding disorder
 - Prolonged primary haemorrhage after trauma
 - A reduced level of vWF
 - Prolongation of the bleeding time
 - Desmopressin



EVALUATION OF THE ASYMPTOMATIC PATIENT WITH ABNORMAL COAGULATION TESTS

