

# Child with bleeding disorders

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# Child with bleeding disorders

## Objectives

Understanding homeostasis

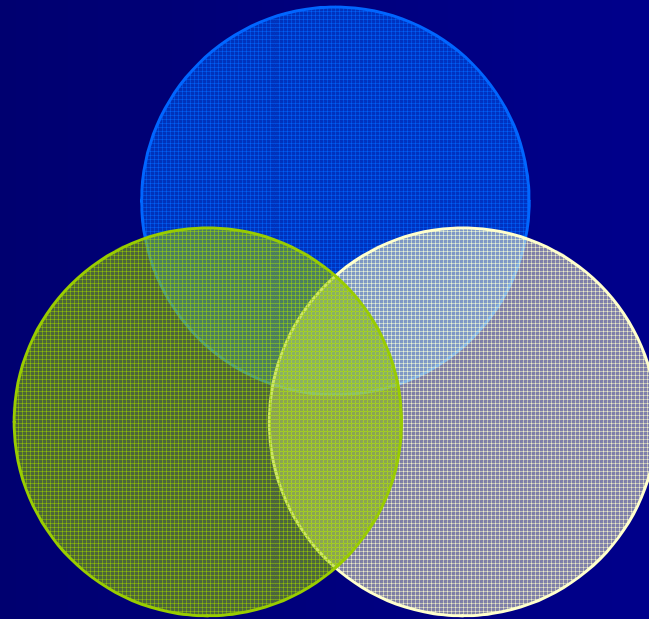
Revision of coagulation cascade

Approach to bleeding child



# Bleeding child

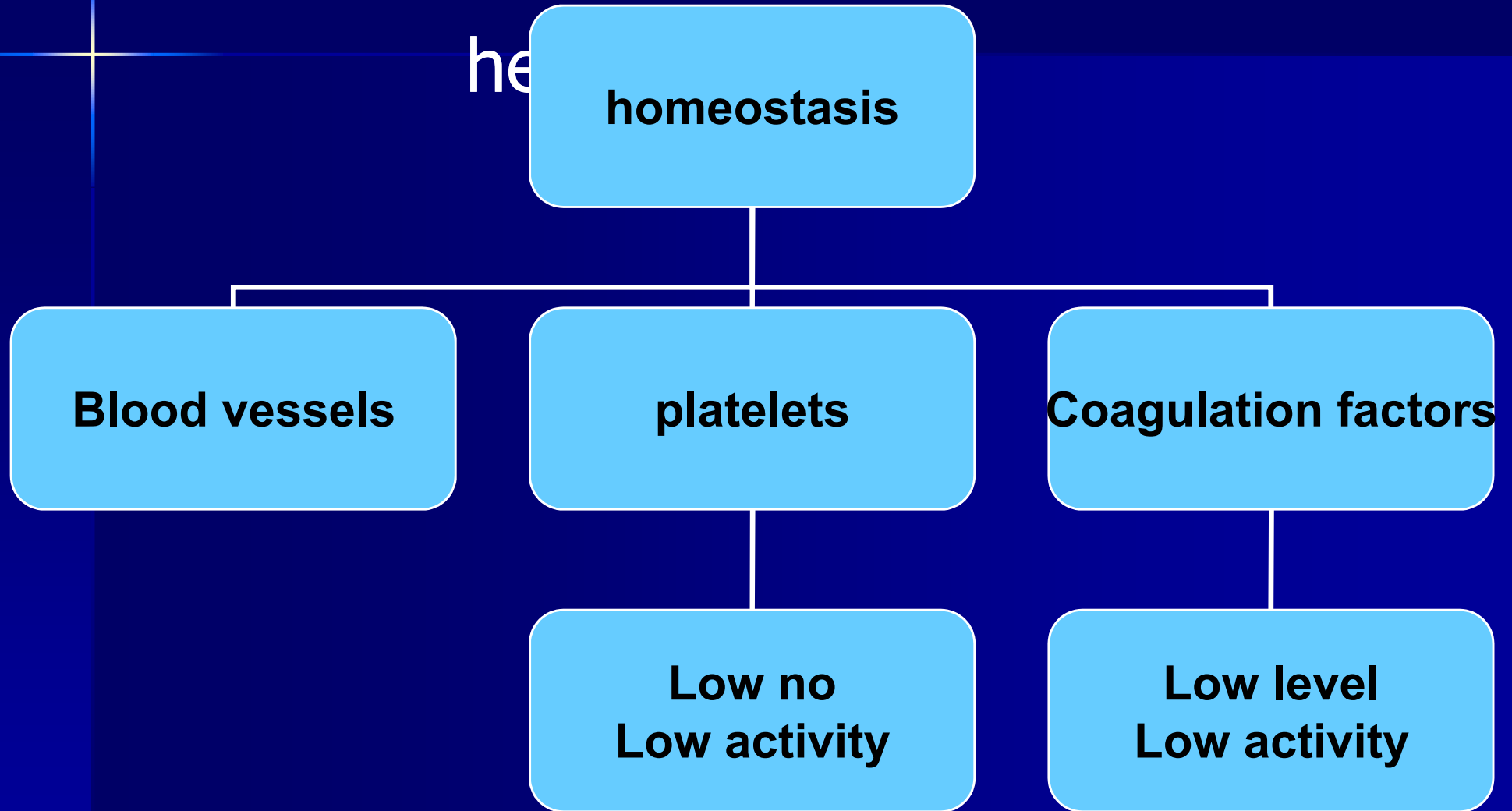
Blood vessels



coagulation

platlets

# Child with bleeding

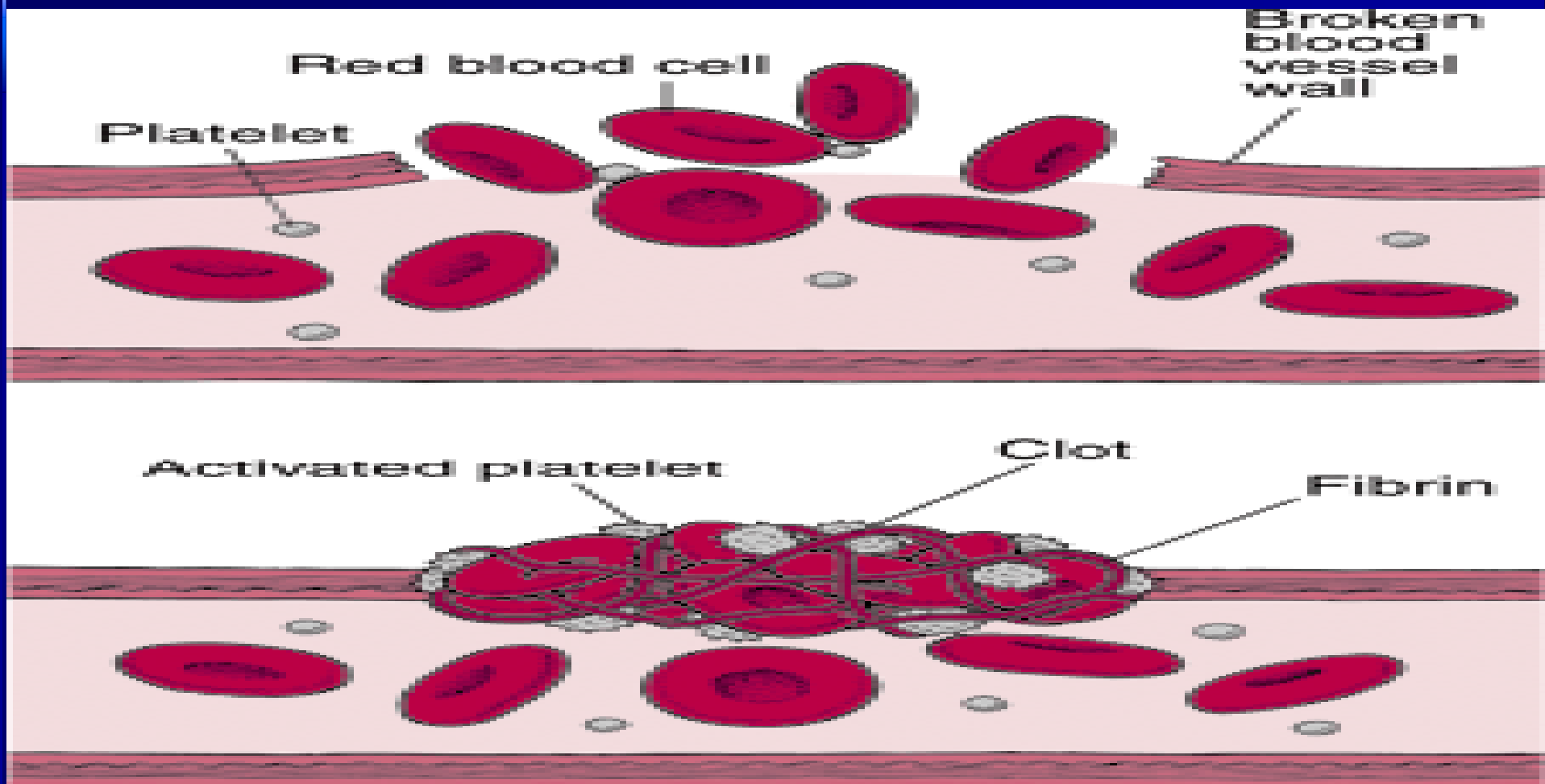


# Approach to child with bleeding

## Homeostasis

- 1) Blood vessel contraction } 1ry
- 2) Platelet adhesion and aggregation } 1ry
- 3) Blood clotting (coagulation cascade -- --  
→ fibrin ) 2ndry
- 4) Dissolution of clot (fibrinolysis )

# Bleeding child (cont,d)



# Approach to child with bleeding

## CLOTTING PATHWAYS

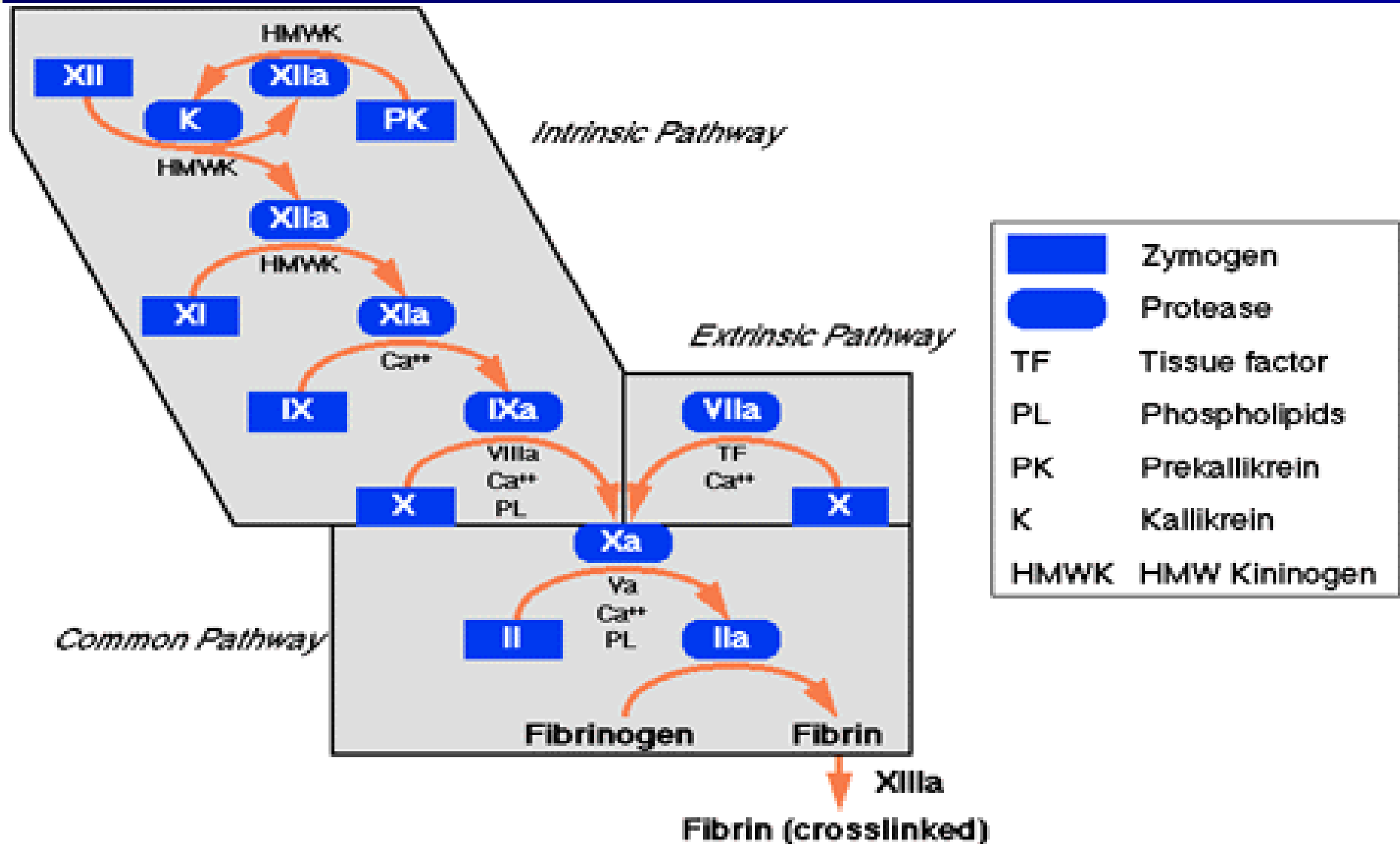
Two pathways:

*Intrinsic* – contact (collagen)

*Extrinsic* – tissue factor

These pathways are interactive  
pathway

# Bleeding child (cont,d)



# Approach to child with bleeding

## Laboratory Tests

-CBC -----Platelets-----**(150---250)**

-**Bleeding Time (platelets)----- (2---8 min)**

-**Prothrombin time-----**(12—15sec)****

-**aPTT -----**(25—39sec)****

# Approach to child with bleeding

## Laboratory Test

-Thrombin time----- (12-18 sec)

-Factors essays.

-Platlet function

# Bleeding child (cont,d)

## Henoch-Schoelene purpura

Definition :

anaphylactoid purpura; small vessels vasculitis.

Cause: unknown.

Clinical : age 2-8 year

m>f

acute OR chronic

# Bleeding child (cont;d)

-low grade fever ,fatigue 50%

Target -----Skin maculopapular rash,crops,  
10days----4months.

Joints –artheritis 60%--

GI –50%

Kidneys—25—50%

CNS---rare.

# Bleeding child (cont,d)

## Investigation

CBC

ESR

IgA,IgM↑

ANA

Anticardiolipin,Antiphospholipid.

U/A ---RBC,WBC,protein.

Skin biopsy.

# Bleeding child

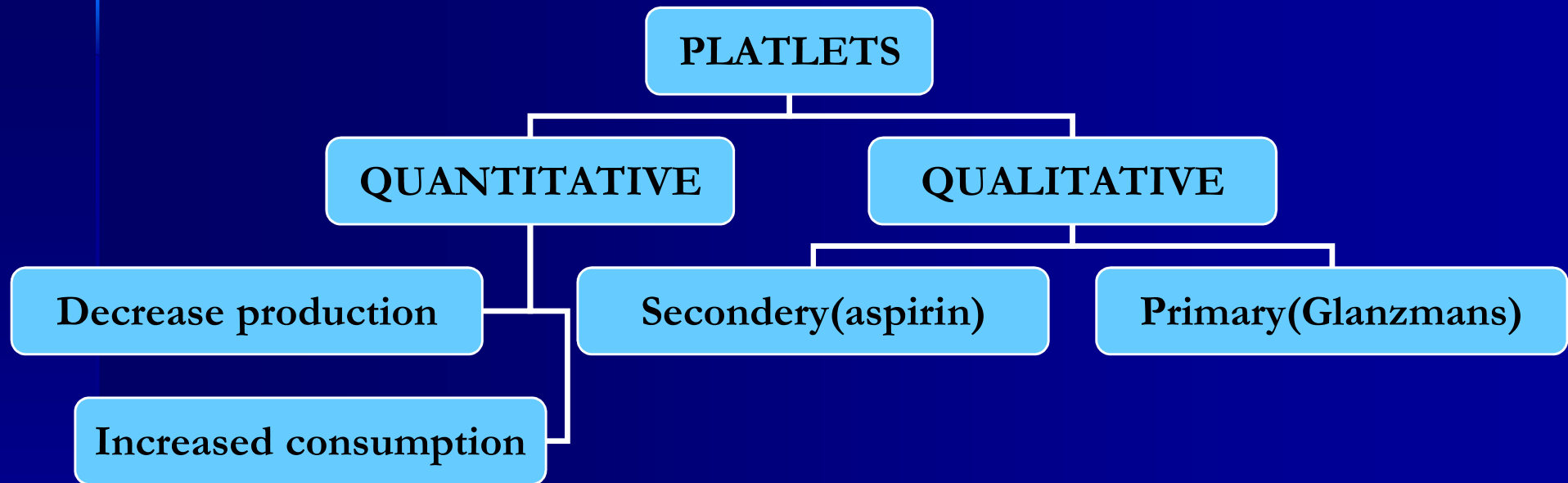
Treatments-----symptomatic

Prognosis-----spontaneous remission

Complication-----GIT

Renal

# Bleeding child



# Bleeding child (cont,d)

## **Idiopathic thrombocytopenia purpura (ITP)**

Etiology- unknown

H/O URI. 50—65%

# Bleeding child (cont,d)

## Clinical picture

```
graph TD; A[Clinical picture] --> B[Acute]; A --> C[Chronic];
```

**Acute**  
**Child=f)**  
**1----4yr**  
**Healthy**  
**No splenomegaly**  
**85%remession**

**Chronic**  
**Adolescence**  
**f>m**  
**Sick background**  
**Splenomegaly**  
**Frequent relapses**

# Bleeding child (cont,d

## CLINICAL

- GUM BLEED
- Peticeal rash
- Others

## INVESTIGATIONS

CBC ---sever thrombocytopenia  
Coombs,ANA

## VIROLOGY

?BONE MARROW ASPIRATION

N

# Bleeding child

## Treatment :

IVIG

Prednisone

IV anti-D

-+ Splenectomy

## Chronic

Steroid

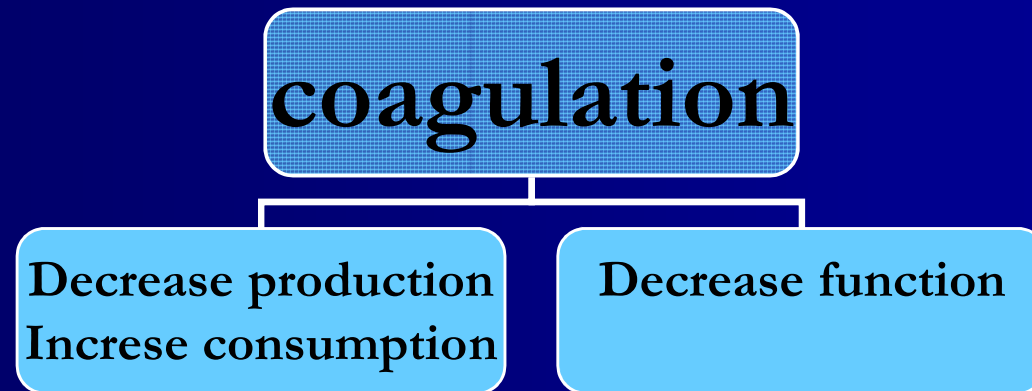
Splenectomy

# Bleeding child

Qualitative:

Glansman,s disease : autosomal recessive  
major bleeding(CNS)

# Bleeding child



# Bleeding child

## Coagulation disorders:

Decrease production—

I) inherited .(hemophilia)

II)acquired (liver dis)

Increased consumption-

DIC

-Altered function ---- medication

# Bleeding child (cont,d

## Hemophilia A (VIII) & B(IX)

Incidence :- 1:5000 M

85% A, 10—15% B

**Inheritance** --- X-linked

**Classification:** > 5U/dl-----Mild

1-5U/dl-----Moderate

<1U/dl-----Sever

# Bleeding child (cont,d)

## Hemophilia

- bleeding at birth
- 30% at circumcision
- continuous bleeding from minor trauma
- hemarthrosis.- spontaneous or induced.
- muscular bleeding—iliopsoas.
  - life threatening-----CNS,Upper air way.
- minor surgery.

# Bleeding child (cont,d)

## Complication :

### Disease related:

.hematomas-----arthropathy

.major bleed-----CNS

### Treatment related:

.blood born infection.---CMV,HIV-  
anti factor viii abs

.

.

# Bleeding child (cont,d)

## **investigation :**

a PTT-----prolonged  
factor assay.

## **Treatment :** .cryoppt

.factor viii conc.

.FFP

.aminocaproic acid

# Bleeding child (cont,d)

## Von Willbrand disease

Incidence:- 1-2%

Inheritance:- AD

Types:-  
↓ amount(1)  
↓function(2)  
abscent(3)

# Bleeding child (cont,d)

Von Willbrand disease :-

-Mucocutaneous bleeding.

Rare -----major bleeding(3)

# Bleeding child

## Investigation:

-quantitative assay of vWf ag,vWf activity.

Plasma viii activity

Platelets counts

BT,PTT

# Bleeding child (cont,d)

## Case 1

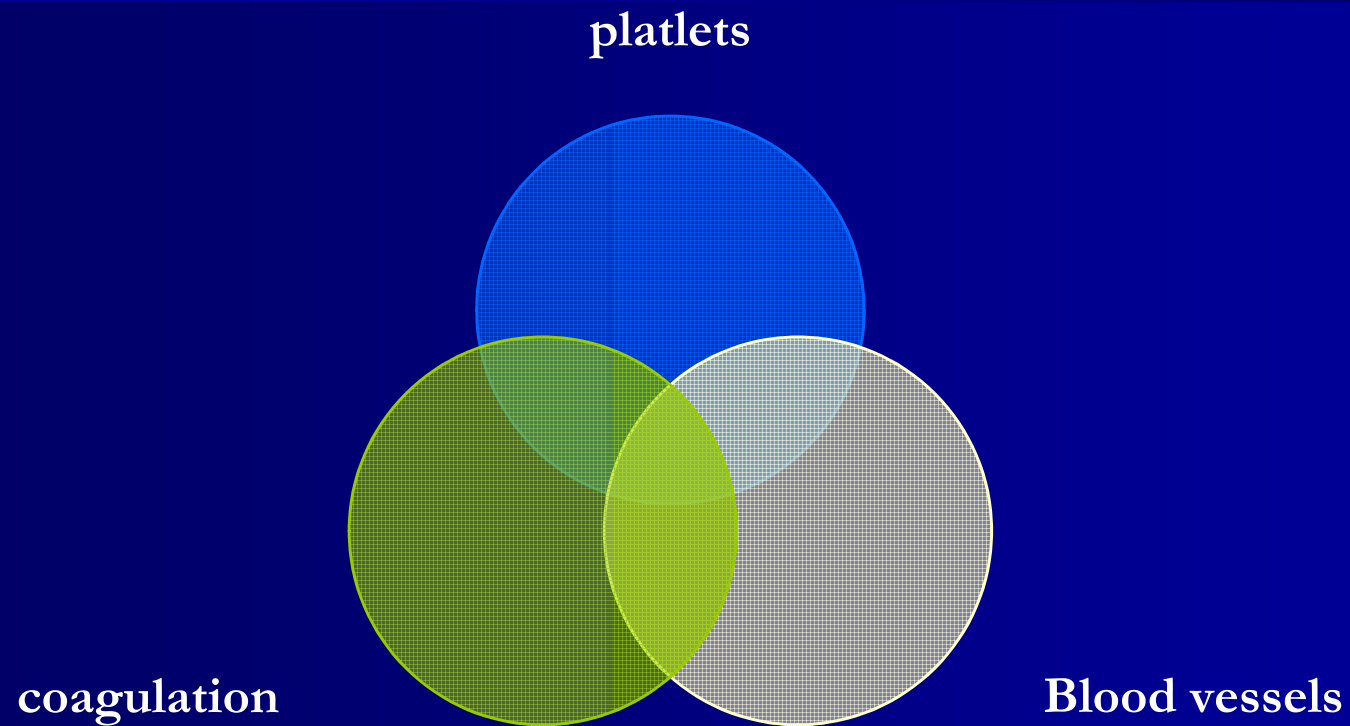
3year old boy presented to ER with sever nose bleed .mother gave history of URI 3d ago. how can u approach this child.

# Bleeding child

## Case 2

13 years old girl presented to ER with menorrhagia, she gave h/o left ankle pain & swelling 2 months back how u will approach.

# Bleeding child



# Bleeding child

## Investigations

- 1) CBC—IPT,DIC ,hpersplenism
- 2) Bleeding time—platlets, Von Will brand.
- 3) PT -----liver disease ,DIC
- 4)aPTT -----hemophilia
- 5)D dimmer
- 6)Factors essay
- 7)Platelet function
- 8)Thrombin time

# Bleeding child

Reference:

-Nelson's Text book of pediatrics.

A dramatic landscape featuring a bright sun in the upper left corner, casting a glow over a sky filled with purple and blue hues. Below the sky, a body of water flows through a valley, surrounded by dark, jagged mountains and rocky terrain. The overall scene is awe-inspiring and majestic.

# Things That Make You Say Subhan Allah!