

^{ART} History Taking In **Hematological Disorders**

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Spectrum of hematological diseases

- **RBC s disorders** : anemias , thrombocytosis -erythrocytosis
- **Bleeding disorders** : platelet disorders , coagulations factors , vessel wall disorders thrombocyto penia ... etc.
- **WBC disorders** : neutropenia and neutrophilia - leukocytosis...
- **Hematological malignancies** : lymphomas, leukemias, monoclonal gammopathies
- **Myelodysplastic Syndromes (MDS)**
- **Thrombotic Disorders** DVT - PE

→ **Bleeding tendency** :- v.w.D - thrombocytopenia - hemophilia - ITP ... etc.

Importance Of History In Hematological Disorders

- Narrow differential diagnosis [History change the causes to differential diagnosis]...
- Select emergent cases for emergent investigations ^{ex lymphoma - leukemia}
- Determine the need for extensive versus limited investigations ^{Blood film + Biopsy. [Hot pt.]}

^{Just CBC}

^{→ Thalassemia - History of anemia [Cold pt] → out clinic}

* Gilbert syndrome. + Jaundice need bilirubin + ALT Just..

if there is ↑ bill. + normal ALT → isolated hyperbilirubinemia → out clinic منحتاج يذاكر بعش
No need for more investigation...

Common symptoms in hematologic disorders

- **Constitutional symptoms** - ^{not specific.} fatigue, lethargy, malaise, weight loss, night sweats. ^{anorexia - Blurred vision...} ← تظهر في معظم الأمراض hematological disease.
- **Symptoms of anemia** - Fatigue, shortness of breath, reduced exercise tolerance, lightheadedness, worsening angina, ankle swelling. ^{palpitation - dyspnea - headache - blurred vision - poor concentration poor university / school performance [general Anemia symptoms]...}
- **Symptoms of neutropenia** - fever, mouth ulcers, skin infections, other recurrent infections. ^{recurrent. [manifestation of ↓ immunity]... resp. - chest.}

5

- **Symptoms of bleeding diathesis** - easy bruising, epistaxis, gum bleeding, joint pain / swelling ecchymosis - rash
petechiae - menorrhagia
hemoptesis - skin or mucosal bleeding.

- **Symptoms of lymphoma** - enlarged / painful lymph nodes, painful splenomegaly, B symptoms: lumps - B symptoms → lymphoma
There is fullness in the R+L hypo chondrium → hepatosplenomegaly...

- B-symptoms
1. Weight loss >10 % of body weight over the past 6 months ,
 2. Drenching night sweating ,
 3. Fever more than >38°C

• **Symptoms of hyper viscosity** - neuropathy, epistaxis, blurred vision, headache, SOB

→ in the hyper cellularity.

الدم حاييجري بشكل صفيح

- dyspnea
- acute coronary syndrome.
- peripheral Ischemia
- Ischemic stroke
- essential thrombocytosis
- PCRU
- leukemia → WBC $\approx$ 100000

• **Symptoms of venous thromboembolism** - limb pain / swelling, chest pain, shortness of breath, palpitations

edema

- hemoptysis

→ PE

→ DVT

* Dawn syndrome associated with hypo thyroidism so we should test the TSH ...

History of present illness

• Listen to your patients history and give the patient time to describe his complaints [good history → good doctor...]

• Determine the following characters of present illness:

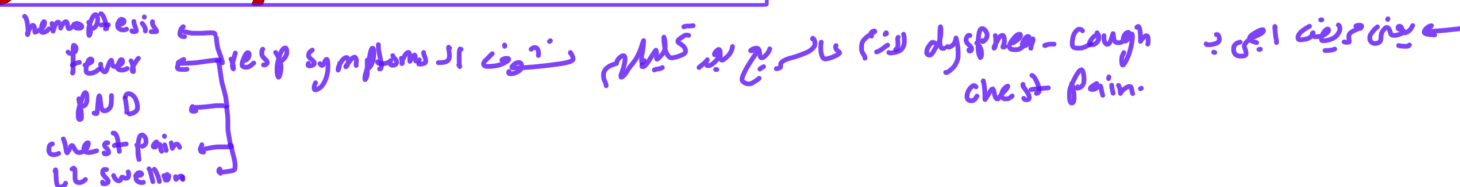
• Onset ✓

• Course ✓

• Duration ✓

• Associated symptoms ✓

• Focus on important negative systemic review — which related to the pt complain



Past Medical History *[very important in the hematological disease]..*

- Ask about any medical conditions the patient has previous been diagnosed with, the management of these conditions, any complications they may have.
- **Common hematologic disorders include:**
 1. Hematologic malignancy - AML, ALL, CML, CLL, myeloma, lymphoma ✓
 2. Myeloproliferative neoplasms - PV , essential thrombocytosis, myelofibrosis ✓
 3. Myelodysplastic syndrome (MDS) ✓
 4. Anaemias - aplastic anemia, IDA, ACD, HA, thalassaemias, SCD ✓
 5. Bleeding disorders - hemophilia's, Von Willebrand disease ✓
 6. Thrombotic disorders - DVT / PE, antiphospholipid syndrome ✓
 7. Platelet disorders - ITP, DIC, TTP, HUS, HELLP, HITS ✓

* IDA → take NSID [long time] lead to occult bleeding from GI
↳ in Rheumatic disease.. this lead to IDA...

* ecchymosis - epistaxis → ↓ PLT function not ↓ PLT count... CKD...

Ask about other Comorbidities

- **CKD** : predispose for anemia of chronic disease... [Renal] + The CKD lead to thrombasthenia ... urea ...
- **Heart failure** : ACD [anemia of chronic disease]
- **Rheumatological disorders** : ACD , IDA , Megaloblastic anemia , hemolytic anemia , VTE
↳ Auto immune disease... methotrexate lead to folate deficiency.
↳ iron deficiency anemia..
- **IBD** : ACD , IDA , Megaloblastic anemia , hemolytic anemia
- **Hypothyroidism** : ACD , IDA , Megaloblastic anemia , hemolytic anemia
↳ due to heavy menses Hashimoto thyroiditis lead to hypothyroidism
↳ via pernicious anemia
- **Liver cirrhosis** : ACD , IDA , Megaloblastic Anemia
↳ zero VK this lead to bleeding...
- **Cancer patients** : nutritional anaemia , VTE , bleeding , neutropenia
- **Malabsorption disorders** : nutritional anaemia [anorexia] ex celiac disease - crhonz disorder.
↳ to the folate → iron → B12 → lead to pernicious anemia.
- **Cancer** : nutritional anaemia , aplastic anaemia , bleeding
↳ due to BM infiltration.

• Transfusion History

• Ask about whether the patient has received any transfusions in the past, and whether they received red blood cells, platelets or plasma products.

يعني كان
المرضى
anemic
- hematological
disease.

• Ask about any previous transfusion reactions (infectious or non-infectious), and whether the patient has any known antibodies.

← كيتعرض ما بعثوا بيبه الـ transplantation و! غا بيبه الـ new malignancy مع تيبه الـ immuno suppressor therapy [حمى]

lung
Kidney
liver

- **Transplant History** take immuno suppressor therapy which lead to malignancy. [lymphoma-leukemia]
- Patients with certain hematologic disorders may have had an autologous or allogeneic stem cell transplant in the past.
- An autologous stem cell transplant patient may suffer :
 1. Infectious disorders ✓
 2. Malignant disorders ✓ later
 3. Rejection ✓
 4. Side effect to medication ✓

• Medication History

- Ask about what medications the patient takes regularly, what they take them for, and what side effects they have had.

lead to all hematological disorders + cancers.. !!

* Hydroxyurea used in the hematological disease may lead to leukemic transformation...
polycythemia rubra vera
essential thrombocythosis } → become Acute leukemia !!

Common medication with hematological side effect

- **Bleeding** - NSAIDs, antiplatelets, SSRIs
- **Thrombosis** - oral contraceptives^{OCB}, hormone replacement, COX-2 inhibitors, erythropoietin, warfarin (initially)
- **Anaemia** - a large number of drugs may cause immune haemolysis, thrombotic microangiopathy, megaloblastic anaemia, sideroblastic anaemia, aplastic anaemia, pure red cell aplasia, or haemolysis in patients with G-6-PD deficiency
- **Erythrocytosis** - anabolic steroids, erythropoietin
↳ ↑ RBCs

بکند انفعالی

- **Thrombocytopaenia** - certain drugs may cause immune thrombocytopaenia, thrombotic microangiopathy or heparin-induced thrombocytopaenia

- **Neutropenia** - NSAIDs, antipsychotics, anticonvulsants, antithyroid drugs, antibiotics, chemotherapy

- **Neutrophilia** - corticosteroids, adrenaline, lithium, G-CSF

- **Eosinophilia** - any cause of drug allergy; particularly penicillins, cephalosporins, phenytoin, carbamazepine, H2 blockers, PPIs

Alcohol history

- Pain associated with alcohol consumption may be seen in patients with **lymphoma** → Hodgkin lymphoma.
↳ generalized pain
- Excessive alcoholism may cause **folate deficiency** with subsequent **megaloblastic anemia**

* Alcohol lead to

- generalized pain → in H. lymphoma.. [specific → splenomegaly-lymphadenopathy مرضى طفرخ، اسهال - Alcoholic - generalized pain ⇒ H. lymphoma.]
- liver cirrhosis..
- ↓ folate → megaloblastic anemia
- pancytopenia..

* unexplained neutrophilia + smoker + no other manifestation → *سجى* smoking 1, dia

↳ lead to inflammatory process in the body → neutrophilia
↳ hypoxia → ↑ Erythropoietin → erythrocytosis.

Smoking history

↳ ↑ Hb / ↑ neutrophil

- Smoking history and lung disease may be significant if a patient has been referred with an **elevated white cell count or raised hemoglobin and hematocrit** ^[17-18]
- Hypoxia induces an increased erythropoietin level, resulting in increased red cell production to aid oxygen transportation around the body.
- This is known as secondary polycythemia.
- Concurrently, the white cell count may also be elevated in response to inflammation caused by smoking.

Allergic history

- Patients with ho FFP allergy or any blood products allergy may have Ig A deficiency or hypogammaglobulinemia

→ Common MCQ question

IgA nephropathy - الـ بـب :- artetaria - allergic reaction - anemia ← نقص الدم
[↓IgA] - recurrent mucosal infection...
[IgA released from mucosa]

congenital يعني من ولادة
IgA انقلد ما يصير له
recurrent mucosal infection...
resp. ↑ cystitis
GI

•Occupational exposure

1. Insecticides and pesticides *lead to Aplastic anemia.*
2. Petroleum products *lead to Aplastic Anemia.*
3. Irradiation



May cause :

1. Aplastic anemia
2. Hemolysis
3. Hematological malignancies
4. MDS

قد تؤدي في العمال إلى الإصابة بنقص خلايا الدم الحمراء

• Family History

- Ask about a family history of **hematologic malignancy**, such as AML, ALL, CML, CLL, myeloma or lymphoma.
- Also ask about a family history of **inherited hematologic disorders** such as haemochromatosis, haemophilia, Von Willebrand disease or thalassemia.
- Ask about **family h/o VTE** ^{→ due to factor 5 leiden deficiency} which may suggest thrombophilia (fact. V Leiden def., prothrombin gene mutation . Protein c or s deficiency).

• Social History

- It is important to understand any patient social situation when taking their history.
- This includes key aspects such as their occupation (or previous occupation, if retired), living situation, mobility, ability to perform activities of daily living, diet and exercise.

دVT
PE
رضه نه

↓
رضه نه
anemia له ما بتفقد هنج.

Travel history

- A patient's travel history may become relevant if assessing venous thromboembolism (**VTE**) risk. سامر لفظة جديدة - ربما اشارة حده صفيه نفس درج رحلت
- Flights of more than 4 hours' duration are a significant contributory risk factor for **VTE**.
- A history of travel to tropical regions including Africa or Asia may become relevant to a patient presenting with severe anaemia, because **malaria** may lie dormant for up to 12 months. لعمريضا جاس على السودان ودعوي

Dietary history

- Patients with malnutrition may suffer different types of anemias include iron def anemia , megaloblastic anemia
- **Vegans and vegetarians** are at risk for b 12 def with subsequent megaloblastic anemia

Bleeding tendency / v.k deficiency و نقص فيتامين ب 12 ←

Menstrual and pregnancy history

- Ask about recurrent miscarriage : thrombophilia , antiphospholipid syndrome which may cause VTE
- Ask about heavy menstrual bleeding : IDA , bleeding disorders. V.W.D
Bleeding tendency.
- Ask about hormonal therapy : VTE

* post partum Bleeding → V.W.D / Bleeding tendency...

History for anemia

- Is there a history of, or symptoms related to, **a medical condition** *and comorbidity...* which is known to result in anemia? *IBD- hypo thyroidism- malabsorption syndrome- cancer...*
- Exposure to **toxic chemicals** in the workplace or environment :
- Insecticides : Aplastic anemia
- Petroleum materials : aplastic anemia and malignancy

⊕ radiation...

anemia is very important

- The use of **medications**, both prescribed as well as over-the-counter, should be examined in some detail.

Auto immune hemolytic anemia

Drugs that cause IDA	Drugs that cause megaloblastic anemia	Drugs that cause AIH anemia	Drugs that precipitate hemolysis in G6PD
• Antiplatelet ✓ • NSAIDs ✓ • Steroids ✓ • Anticoagulants ✓	• Methotrexate ✓ • Trimethoprim ✓	• Penicilins ✓ • Cephalosporines ✓ • Quines ✓ • Methyldopa ✓ • Isoniazid ✓	• Antimalarial ✓ • Sulpha drugs ✓ • Nitrofurantoin ✓ • Quinolones ✓ • Aspirin high dose ✓ • Vit K ✓

• Age

- Hereditary disorders like g6pd , SCD , and thalassemia are common in childhood
- IDA is common in school age due to malnutrition
- Malignancy is common in elderly

↳ hereditary disease...
↳ in childhood.

• Sex

- G6pd is sex linked disease and seen in male → unlike in female.

• Ethnicity :

- SCD is common in Africans
- G6pd common in Mediterranean's
- Thalassemia is common in Mediterranean's

* The most common cause of the GB stone is cholesterol... [80-90%]
↳ radiobsent :- راديوبنت , لا يفرغ

* The most common cause of the kidney stone → Ca⁺ oxalate [80%]
↓

راديوبنت راديوبنت radiobique

* anemia + heavy mentes → IDA.

* anemia + gall bladder stone + red urine → hemolytic anemia...

↳ due to ↑ Bill. in the Bile [over saturated] → pigmented stone :- 10% of total GB stone

- **Heavy menstrual bleeding or metrorrhagia (IDA)**
- **Melena , Hematuria (IDA)**
- **Ask about foods habits: e.g.vegans (b12 def)**
- **History of gallstones , red urine (hemolytic anemia)**

- Ask about jaundice (hemolytic anemia)
anemia + Jaundice. → hemolytic anemia
 - Auto immune
 - non immune
 - micro angio pathic
 - etc
- Ask about thrombotic events (sickle cell anemia , PNH)
DVT/PE
 - may lead to stroke due to hyperviscosity syndrome.
- Ask about family history of anemia (SCD , Thalassemia, G6pd).
- Ask about diarrhea : malabsorption disorders such as celiac disease that .may cause nutritional anemia
+ abdominal pain + distension.
or celiac

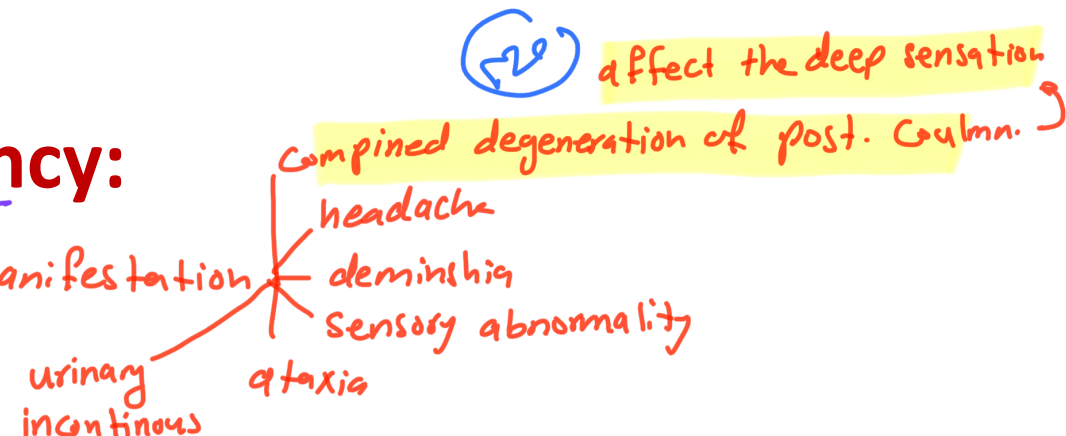
Ask about symptoms of iron deficiency :

1. Brittle hair. → ستره یتکس
 2. Brittle nail → یتکس اظافه خارج
 3. Dysphagia (plummer – vinson syndrome) → pseudowit in the esophagus.
 4. Restless leg syndrome → in IDA so we should do ferritin level... (ما به ینا) بیصیرا رپله یهجه منیض یقوم درج ینا)
 5. Beeturia → dark red urine (dark red urine) (ما یکن بنجر بیصیر :- kidney) فلا (هیتان البفره ماده صبغیه بتقره غار urine فیتهم) اکدیہ بآل دتواخ (kidney) فلا
 6. Pica → آکل شیء غیریه (آکل شیء غیریه)
- Pagophagia : ice
 - Geophagia (earth, soil, sand, clay, chalk).
 - Geomelophagia (raw potatoes).
 - Xylophagia (wood, or wood products).

Ask about symptoms of B12 deficiency:

• Neurological manifestation :

1. Ataxia
2. Memory loss
3. Recurrent fall in dark spaces
4. Urinary incontinence
5. LL numbness and paraesthesia
6. Motor weakness



* superficial sensation → fine touch - pain - temp.

* deep sensation → vibratory - proprioceptive - position sense

→ we exam the vibratory vib fork. in the ear and the Bone [internal or external malleolus.]

↳ if he not feel there is vibratory abnormality...

recurrent fall at night is S1

there is lost of position sense in the TDA

Ask about symptoms of hemolytic anemia

- Ask about jaundice, dark urine, left upper quadrant fullness, fever, angina, tachycardia, and signs of heart failure.
- Patients with cold agglutinin disease (CAD) may present with a history of acrocyanosis and/or Raynaud phenomenon
- Back pain and bone pain
- Previous history of GBS *gall Bladder stone.*



Ask about symptoms of sickle cell anemia

- Painful crises : chest pain , abdominal pain

- Priapism sustained painful erection..

- Veno-occlusive crises [pain in the Body]

- Dactylitis → اصابع الـسج (not specific to SCD).

→ splenic infarction [sudden pain]



→ Dactylitis + anemia
SCA

History in bleeding disorders

young age + children → hereditary disorders [v.w.D - hemophilia]
old age → cancers..

- **Age** (senile purpura in elderly, hemophilia in children)

- **Underlying medical conditions** — Several medical conditions predispose to bleeding, as discussed in separate topic reviews.

1. **Cancer** ① hyper coagulable state → DVT / PE
② malnutrition → ↓VK → ↓1972 factors → bleeding tendency.
③ anorexia + vomiting → ↓VK → Bleeding tendency.
2. **Excess alcohol use** → lead to liver cirrhosis + ↓VK.
3. **Liver disease** → thrombocytopenia with hypersplenism + ↓VK + liver cirrhosis
4. **Kidney disease** → lead to thromboasthenia [↓Plt function]
5. **Connective tissue disorders** → DVT / PE. [thrombotic event]..
6. **Hypothyroidism**

- **Fever and weight loss** (malignancy, leukemia)
→ infiltrate the BM lead to thrombocytopenia
- **Dietary history** ۱۰۰۰ have ۱۰۰۰ → bleeding.
so have ۱۰۰۰ → bleeding.
- **History of iron deficiency or iron-responsive anemia.**
→ due to intravascular hemolysis
- **Abdominal pain and arthritic pain** (H-S purpura)

Ask about Family history of bleeding. *in bleeding tendency.*

- A family history of bleeding should be obtained to help determine the likelihood of an inherited condition.
- Some individuals may be aware of a specific diagnosis in a first- or second-degree relative; others may report a family history of severe bleeding requiring medical interventions (surgery, transfusions).
- As many as 30 to 40 % of individuals with hemophilia A have a de novo germline mutation and thus have a negative family history. **The absence of family history → (مستزاد بطول وراثی) خفیف تا شدید از حد عادی*
- Certain (eg, rare coagulation autosomal recessive conditions on factor deficiencies, Glanzmann thrombasthenia, type 2N VWD) **do not manifest in either parent.**

**v.w.D - hemophilia ⇒ familial disorder.
[mode of inherited وراثی]*

- The transmission pattern may suggest a specific set of disorders.
- Hemophilia A and B are X-linked (transmitted from carrier mothers to affected sons and from affected fathers to carrier daughters), whereas VWD and other factor deficiencies are autosomally transmitted.

Ask about Prior bleeding events over time

- **Bleeding during** infancy (eg, umbilical stump, circumcision) and childhood (eg, bleeding with loss of deciduous teeth).
ما دقت أسرة في أول 7 أيام من المولود صدحها - Bleeding
شائع الأسنان
marker of inherited bleeding disorder.
→ hemarthrosis and hematoma in children
** Hemophilia appear at 1 year - السبب انه الطفل يبدأ يمشي ويضع ويخبط*
- **Bleeding during** adolescence and adulthood (additional questions below related to menstruation and pregnancy).
- Any **bleeds severe enough to require** surgical intervention, nasal packing or cautery, a visit to the emergency department, or transfusion.

📝 Ask about Medications use

Anticoagulants	Interfere with clot formation (secondary hemostasis)	Bleeding
Antiplatelet agents, including NSAIDs	Interfere with platelet function (primary hemostasis)	Bleeding
Glucocorticoids	Interfere with <u>vascular integrity</u> [affect the vessels wall]	
Antibiotics	Cause <u>vitamin K deficiency</u> , especially with longer use Some interfere with platelet function	Bleeding
SSRIs	Interfere with <u>platelet function</u> (primary hemostasis)	
Alcohol	Complications of liver disease May cause thrombocytopenia	
Vitamin E	Interferes with <u>vitamin K metabolism</u> in some individuals	Bleeding
Garlic	Interferes with <u>platelet function</u> in some individuals	
Ginkgo biloba	Unknown	

Ask about Outcome of bleeding challenges:

... + جبره ...

→ Surgical intervention
→ Hormone ... etc
→ significant bleeding risk tendency.

- **Trauma**, including **severity of bleeding**, need for **surgical intervention**, and need for **transfusions**.
- **Surgical procedures**, including timing and location, comments of the surgeon regarding the character of the bleeding (eg, diffuse oozing versus bleeding from a specific source), and need for transfusions.
- **Dental procedures** (eg, extractions), including timing, duration, and need for packing or additional interventions.
- If a woman has bled with **some procedures** but not others, she should be asked if she was taking **oral contraceptives** or **hormone therapy** during procedures in which she had good hemostasis, since these hormones can increase levels of von Willebrand factor (VWF) and normalize hemostasis.

Ask about Menstrual history

- Especially the presence of nighttime "flooding," passage of clots larger than approximately 2.5 cm.
- Duration of menses longer than eight days,
- Development of iron deficiency,
- Heavy menstrual bleeding (previously called menorrhagia) leading to hysterectomy at a young age
- Measures such as number of pads or tampons used can be imprecise because they depend on the fastidiousness of the individual, and the volume of blood lost is nearly impossible to determine if pads or tampons are used.
- Endometriosis and hemorrhagic ovarian cysts are seen with increased frequency in women with von Willebrand disease (VWD)

→ heavy menses.. (مع الحمل يتحسن) (↑ estrogen → ↑ U.W.F → ↓ Bleeding)
أو TB

Ask about Pregnancy history ✓

- Including **bleeding with delivery or postpartum** and **early pregnancy loss** (seen with some rare coagulation factor disorders).
- In VWD, **postpartum bleeding (24 to 28 hours after delivery)** is more common than **bleeding during pregnancy** because higher estrogen levels in the second and third trimesters promote increased VWF production.
- Pro-hemostatic changes during pregnancy may also reduce bleeding due to other disorders.

Not always bleeding 8-

1. Delayed wound healing (Factor XIII deficiency).
2. Recurrent miscarriage (Afibrinogenemia, Factor XIII deficiency).
3. Thrombotic events (Factor VII def. and Dysfibrinogenemia).

بلى ال bleeding

Interpretation of the bleeding history

1- A history of **bleeding severe enough to require surgical interventions, transfusions, or iron replacement** supports the suspicion of an underlying bleeding disorder.

2- Conversely, a history of surgical procedures, dental extractions, and/or significant trauma that did not require transfusions or other nonstandard interventions is evidence **against the presence of an inherited bleeding disorder**

3- a history of easy bruising, which is commonly reported, lacks sensitivity and specificity and may be a sign of **trauma** or **skin fragility** rather than a true bleeding disorder.

4- Symptoms such as hematuria, melena, and heavy menstrual bleeding **are also less helpful** since these are more likely to be due to structural/anatomic lesions rather than to a bleeding diathesis.

5-Site of bleeding *very important...*

1-Superficial skin and mucous membrane bleeding : *[hemoptesis - epistaxis - melen - petechia ecchymosis - purpura]..*

- Platelet and vascular disorders are generally characterized by **skin and mucosal bleeding** (eg, mouth, nose, urinary tract, gastrointestinal tract) and **immediate bleeding** upon a bleeding challenge.
- Epistaxis may be a presenting finding in VWD or hereditary hemorrhagic telangiectasia (HHT).
- New-onset bruising may herald a new thrombocytopenic disorder (eg, immune thrombocytopenia [ITP], acute leukemia) or an acquired coagulation disorder such as acquired hemophilia or disseminated intravascular coagulation (DIC).

The hemostasis → 1ry :- Plt - vessels wall responsible for 1ry hemostasis. lead to superficial bleeding...
→ 2ry :- coagulation factor " " 2ry " " " " deep " " [hemophilia - Afibrinogenemia]



ecchymosis

↳ >1cm



Petechia

↓
pin point
[1-2mm]



Purpura

↳ 4-10mm

→ [hemarthrosis or hematoma] Deep muscular, joints and deep organs bleeding

- Coagulation factor disorders are generally characterized by bleeding into muscles and joints and delayed bleeding after a bleeding challenge.
- Bleeding with **circumcision** is characteristic of severe **hemophilia A** (factor VIII deficiency) or **hemophilia B** (factor IX deficiency).
- Exceptions are **factor XI** deficiency, which tends to have more **mucosal bleeding**, and **factor XIII deficiency**, which tends to show **delayed bleeding** after trauma or surgery.
- **Umbilical stump** bleeding is characteristic of **factor XIII** deficiency.



Knee hemarthrosis

↳ in the joints..



Hematoma

↳ in the muscles

6- Disorders of **fibrinolysis** tend to show **delayed** bleeding after trauma or surgery.

7- Inherited disorders tend to present in childhood if severe but frequently present in adulthood or only after a bleeding challenge if mild. Some inherited disorders have additional syndromic features.

8 -Some acquired disorders are associated with an underlying condition such as pregnancy, cancer, or connective tissue diseases.

* early bleeding :- due to p1+dys function

* delayed " :- due to coagulopathy in the fibrinolytic system..

يسبب Bleeding



تجسّن ال thrombin (2) في 13 factor لعل contraction to the fibrin network من يتسبب في ذلك آليّة
فibrinolytic system فيصنع كل ال Clots من تتغل ال vessels لعل فibrinolytic system [factor 13] → lead to delayed bleeding...

Bleeding Score

- It may be helpful to use a standardized bleeding assessment tool (BAT) in the evaluation of a patient with a suspected bleeding disorder in order to codify the bleeding history .
more objective method..
- a BAT, is used to quantify our clinical impression of the likelihood of a bleeding disorder.
- A low score is very good at predicting the absence of a bleeding disorder and can help in limiting the amount of laboratory testing in an individual with a low likelihood of an abnormal finding.
- Normal range is <3 in children, <4 in adult males, <6 in adult females.
*وبجده حقه لازم نحدد بامق التمايل والخصوصيات هتتم المعايير بيت عنده
Simple variant doesn't need extensive investigation..*

- The first **BATs** were validated for **von Willebrand disease** (VWD) (eg, the Molecular and Clinical Markers for the Diagnosis and Management of type 1 VWD [MCMDM-1 VWD]).
very sensitive.
- Subsequently, a condensed score was devised (the condensed MCMDM-1 VWD BAT) that incorporated more details about interventions required for bleeding (eg, packing, surgery, medications)
- The International Society on Thrombosis and Haemostasis (ISTH) has made a version of this BAT available online at bleedingscore.certe.nl
- This score has subsequently been validated in several populations: **VWD**, **General bleeding evaluation**, **Heavy menstrual bleeding**, **Platelet disorders** / Gyninital disorder...

↳ thrombosthenia - Glanzman thrombosthenia

← BAT score 5-10 extensive investigation 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

SYMPTOMS (up to the time of diagnosis)	0 ^{\$}	1 ^{\$}	2	SCORE	3	4
Epistaxis	No/trivial	- > 5/year or - more than 10 minutes	Consultation only*	Packing or cauterization or antifibrinolytic	Blood transfusion or replacement therapy (use of hemostatic blood components and rFVIIa) or desmopressin	
Cutaneous	No/trivial	For bruises 5 or more (> 1cm) in exposed areas	Consultation only*	Extensive	Spontaneous hematoma requiring blood transfusion	
Bleeding from minor wounds	No/trivial	- > 5/year or - more than 10 minutes	Consultation only*	Surgical hemostasis	Blood transfusion, replacement therapy, or desmopressin	
Oral cavity	No/trivial	Present	Consultation only*	Surgical hemostasis or antifibrinolytic	Blood transfusion, replacement therapy or desmopressin	
GI bleeding	No/trivial	Present (not associated with ulcer, portal hypertension, hemorrhoids, angiodysplasia)	Consultation only*	Surgical hemostasis, antifibrinolytic	Blood transfusion, replacement therapy or desmopressin	
Hematuria	No/trivial	Present (macroscopic)	Consultation only*	Surgical hemostasis, iron therapy	Blood transfusion, replacement therapy or desmopressin	
Tooth extraction	No/trivial or none done	Reported in ≤25% of all procedures, no intervention**	Reported in ≥25% of all procedures, no intervention**	Resuturing or packing	Blood transfusion, replacement therapy or desmopressin	
Surgery	No/trivial or none done	Reported in ≤25% of all procedures, no intervention**	Reported in ≥25% of all procedures, no intervention**	Surgical hemostasis or antifibrinolytic	Blood transfusion, replacement therapy or desmopressin	

Menorrhagia	No/trivial	Consultation only* or - Changing pads more frequently than every 2 hours or - Clot and flooding or - PBAC score>100#	intervention** - Time off work/school > 2/year or - Requiring antifibrinolytics or hormonal or iron therapy	- Requiring combined treatment with antifibrinolytics and hormonal therapy or - Present since menarche and > 12 months	- Acute menorrhagia requiring hospital admission and emergency treatment or - Requiring blood transfusion, Replacement therapy, Desmopressin, or - Requiring dilatation & curettage or endometrial ablation or hysterectomy)
Post-partum hemorrhage	No/trivial or no deliveries	Consultation only* or - Use of syntocin or - Lochia > 6 weeks	- Iron therapy or - Antifibrinolytics	- Requiring blood transfusion, replacement therapy, desmopressin or - Requiring examination under anaesthesia and/or the use of uterin balloon/package to tamponade the uterus	- Any procedure requiring critical care or surgical intervention (e.g. hysterectomy, internal iliac artery legation, uterine artery embolization, uterine brace sutures)
Muscle hematomas	Never	Post trauma, no therapy	Spontaneous, no therapy	Spontaneous or traumatic, requiring desmopressin or replacement therapy	Spontaneous or traumatic, requiring surgical intervention or blood transfusion
Hemarthrosis	Never	Post trauma, no therapy	Spontaneous, no therapy	Spontaneous or traumatic, requiring desmopressin or replacement therapy	Spontaneous or traumatic, requiring surgical intervention or blood transfusion
CNS bleeding	Never			Subdural, any intervention	Intracerebral, any intervention
Other bleedings^	No/trivial	Present	Consultation only*	Surgical hemostasis, antifibrinolytics	Blood transfusion or replacement therapy or desmopressin

THANK YOU

Done ☒ 