

Hematology



Histology

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Biochemistry

PBL

Pathology

lecture number : 1

Pharmacology

Physiology

Microbiology

Done BY :

Handout

Sheet

Slide

Clinical approach in Hematology

General classification of hematologic diseases

A- Benign Hematology

- 1- Hemophilia
- 2- Thrombophilia
- 3- Anemia
- 4- benign WBC disorders
- 5- BM disorders/ non-malignant
- 6- Peripheral destruction/ sequestration

B- Malignant Hematology

- 1- Leukemia: acute/chronic
- 2- Lymphomas: NHL/ HL
- 3- Plasma cell myeloma
- 4- Myeloproliferative neoplasms (MPN)
- 5- Myelodysplastic syndrome (MDS)

General Outlines

- 1- Symptoms and signs overlap between different hematologic diseases, and even in non-hematologic diseases
- 2- Severity of symptoms may vary in the same disease according to many factors
- 3- Sometimes symptoms are essential part of the disease criteria

Symptoms and Signs Grouping

A- Those related to RBC: low Hb or high Hb or abnormal Hb

B- Related to WBC count and differential: Low:
Leukopenia

High: leukocytosis, eosinophila, infiltration/ Malignant cells

Dysfunction: immune deficiency

C- Related to platelets: Low: thrombocytopenia

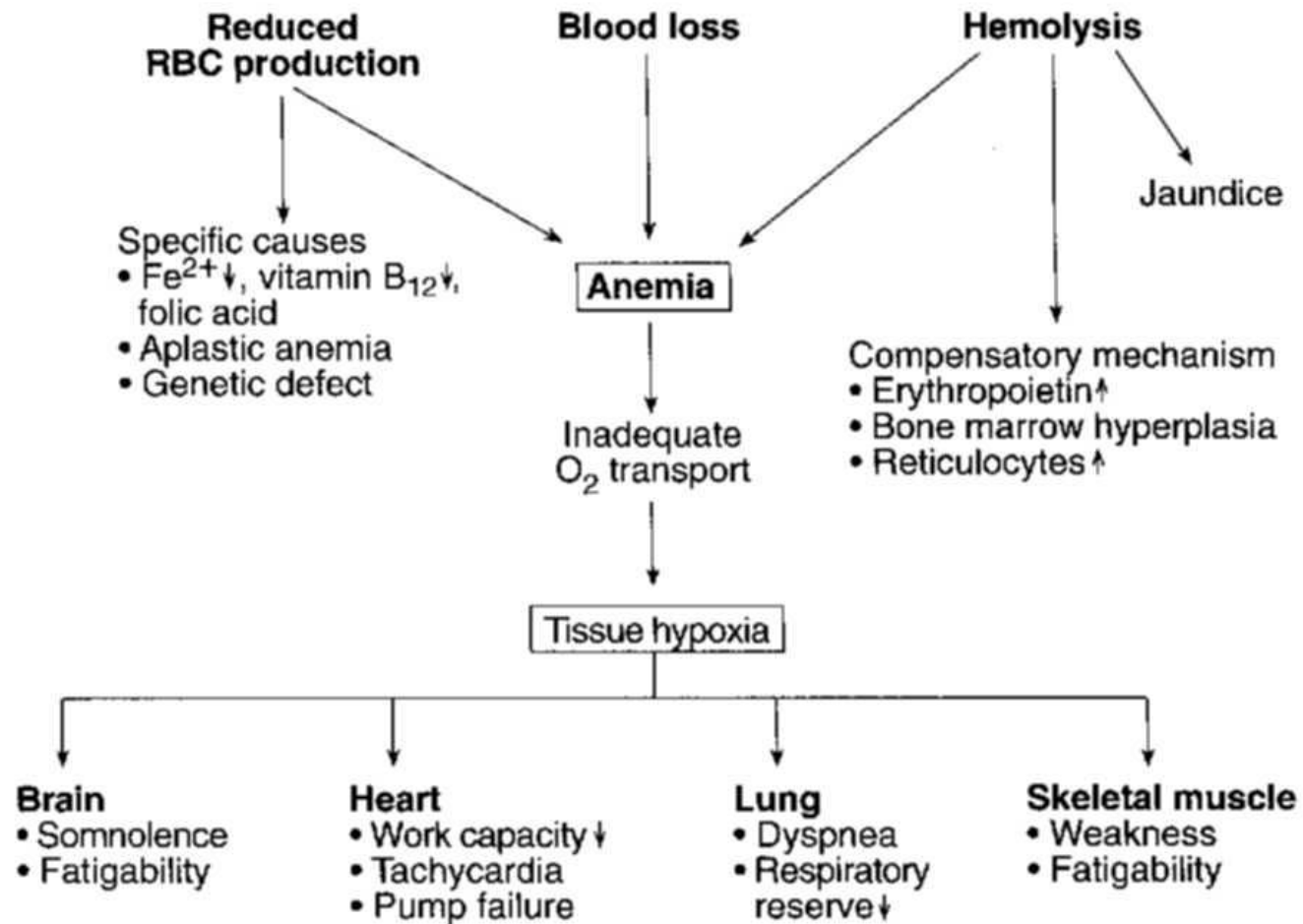
High: thrombocytosis, dysfunction

D- Related to blood proteins: Clotting Factors, paraprotein

Signs in Hematology

- 1- Frequently non-specific (fatigue, dizziness, cyanosis, splenomegaly)
- 2- May be characteristic (nocturnal hemoglobinuria, crew cut skull, shin ulcer, glossitis)
- 3- Combination of the abnormalities causing the symptoms (bleeding, aplastic crisis)
- 4- May be very obvious in advanced disease or very subtle in early disease (chronic leukemia)
- 5- Careful examination is needed
- 6- Changing signs require caution and repeated examination

Anemia



Symptoms and Signs of Anemia

1- Symptoms vary according to

A- Duration

B- Severity

C-Type

D- Functional status of the heart, lungs, kidneys

2- All anemias may have symptoms related to the “anemia syndrome”

The “Anemia Syndrome” due to tissue hypoxia

1- Dizziness

2- Fatigue

3- Shortness of breath especially on exertion

4- Headaches

5- Chest pain/ palpitations

6-? Heart Failure

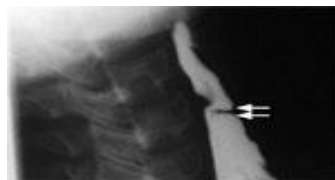
Case one

24 yr old female complains of Dizziness, Fatigue, Shortness of breath especially on exertion and Headaches for the last 2 months. She has been losing scalp hair.

She does not eat red meat and has reported heavy menstrual bleeding.

Her physical exam showed
Lab and Xray test showed

Likely Diagnosis



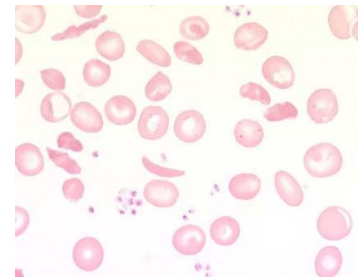
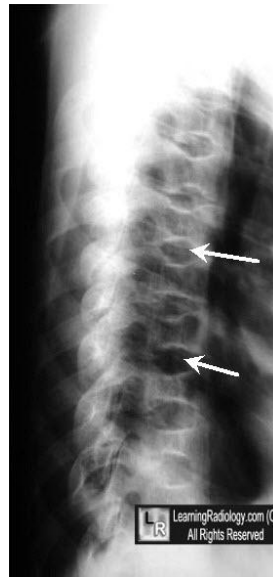
Case TWO

18 yr old male complains of acute pain in his back, Dizziness, Fatigue, Shortness of breath and Headaches for the last 6 hours. He has had similar attacks.

Physical exam showed

Lab and Xray test showed

Likely Diagnosis



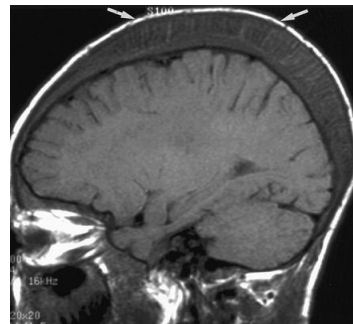
Case Three

13 yr old male complains of skin pigmentation, abdominal swelling and pallor. He has been receiving blood transfusions since the age of 9 months.

Physical exam showed

Lab and Xray test showed

Likely Diagnosis

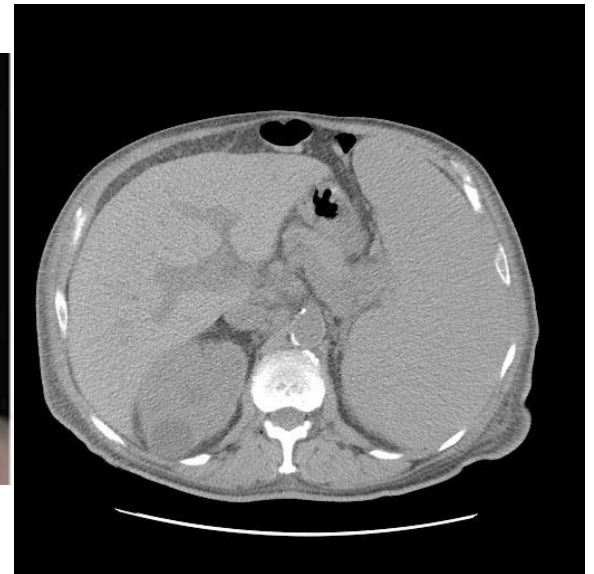


Case four

50 yr old man complains for several weeks of hotness in his face, itching and severe acute pain in his big toe.

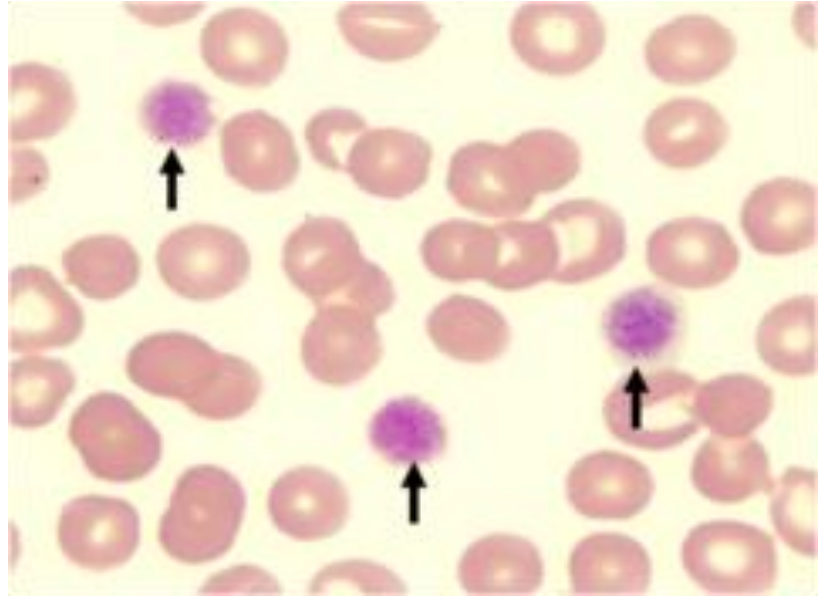
Physical findings

Likely diagnosis



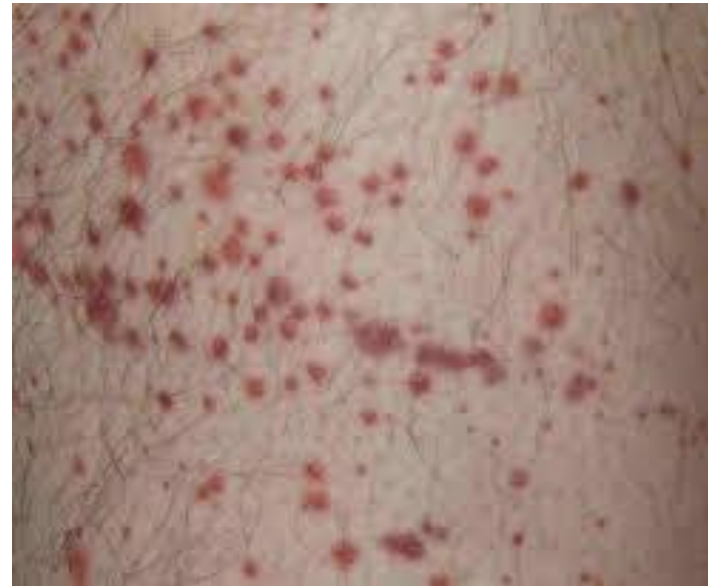
Case five

- 3 year old kid presented with unexplained large bruises over skin. Physical examination showed no signs of anemia. Abdominal palpation of the left upper quadrant showed palpable small movable mass.



Case six

- 22 year old man, presented with widespread skin rash, fatigue, fever, confusion, decreased urination.
- Physical examination



Case SEVEN

19 yr old boy complains of repeated attacks of large joint painful swelling especially in his knees for several years. His maternal uncle has similar condition.

Physical findings

Likely diagnosis



Case Eight

49 yr old lady complains of painful swelling and hotness of her L leg following coming back from visiting her relatives in USA. She had repeated attacks of cough with hemoptesis and shortness of breath.

Physical findings

Likely diagnosis

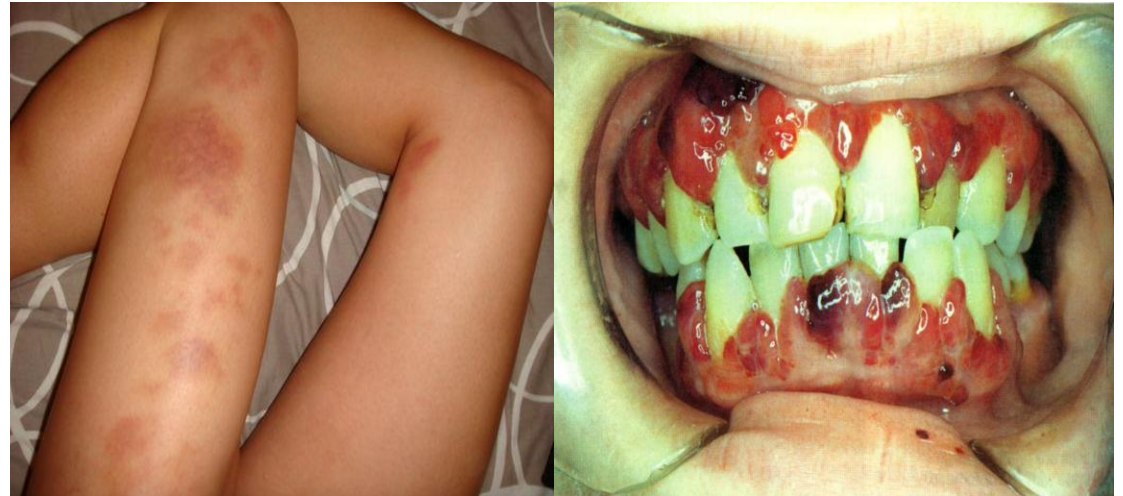


Case Nine

29 yr old lady complains of fever and painful gums for 1 week. She developed easy bruising and hemorrhagic spots on her trunk.

Physical findings

Likely diagnosis



Case TEN

69 yr old man complains of fever and cervical and axillary swelling for several months with occasional fever and productive purulent cough.

Physical findings

Likely diagnosis



Case ELEVEN

57 yr old man complains of back pain for several months and fracture of his L leg 2 days ago.

Lab and Xrays

Physical findings

Likely diagnosis

