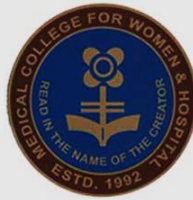


HAEMODYNAMIC DISORDERS, THROMBOEMBOLIC DISEASE, and SHOCK

TOPIC 7 HAEMORRHAGE

Professor Tamanna Choudhury
HOD, Pathology
MCWH





References:

- **Robbins & Cotran Pathologic Basis of Disease- 9th edition**
- **Walter & Israel GENERAL PATHOLOGY 7th edition**
- **Davidson's Principles and Practice of Medicine-23rd edition**
- **IMAGES- Above mentioned books & internet**



Haemorrhage

Defined as extravasation of blood due to rupture of blood vessel



Haemorrhage

Haemorrhage may occur -

(a) **Externally**

(b) **Internally**

- Haematoma
- Haemothorax, haemopericardium
haemoperitoneum, haemarthrosis etc.
- Petechiae (1-2mm), purpura (slightly
larger), ecchymosis(1-2cm)/ bruises



Haemorrhage

Haematoma



Haemoperitoneum





Haemorrhage

Petechiae



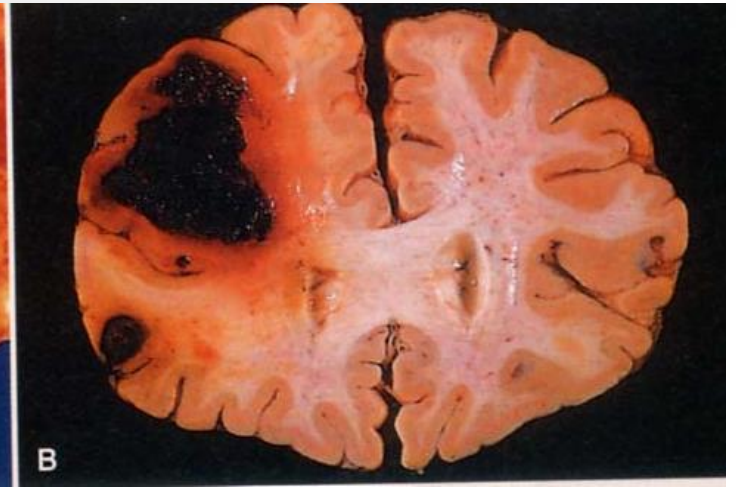
Purpura





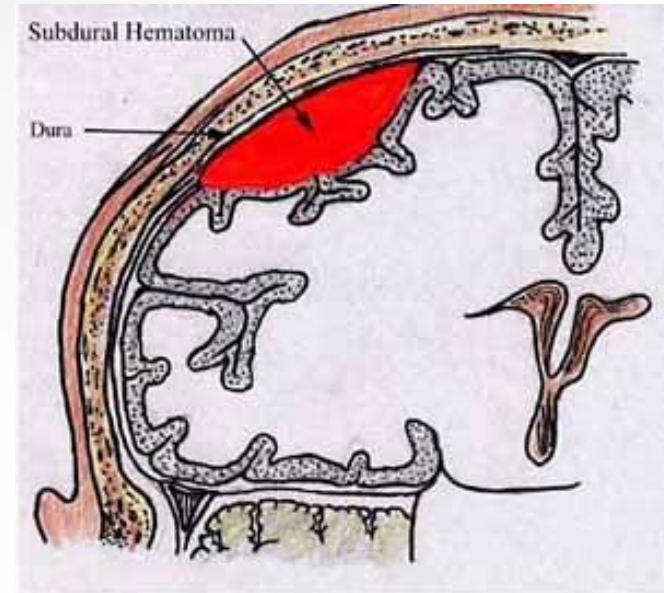
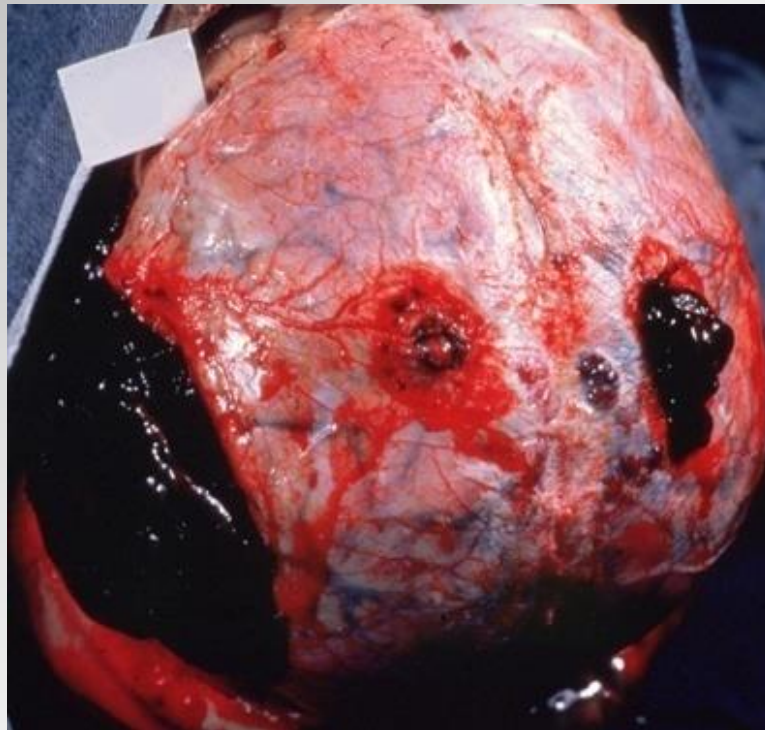
A. Petechial haemorrhage in colonic mucosa

B. Intracranial haemorrhage





Subdural haematoma





Haemorrhage

Causes

Trauma

Abnormalities of blood vessel wall

Neoplastic invasion

High pressure within the vessels



Haemorrhage

Blood loss may be

(a) Large & sudden

(b) Small & repeated



Haemorrhage

Effects of acute haemorrhage depend on

- (a) **Amount** of blood lost
- (b) **Speed** with which loss occurs
- (c) **Site**



Haemorrhage

***Chronic blood loss- leads to
hypochromic microcytic anaemia
Acute haemorrhage- more
serious immediate consequences***



Haemorrhage

- **< 20% of blood vol. loss - Slight gen.effects**
- **Sudden loss of 33% - may cause death**
- **Gradual loss > 50% - may not be fatal (Over a period of 24 hrs)**
- **However, with losses of over 50% - effects are always serious**



Body response to acute haemorrhage

■ Phase I

- Early changes- nervous mechanism- an immediate syncope
- Redistribution of blood to the vital centres

■ Phase II- restoration of blood volume

■ Phase III- the replacement of lost red cells

Ref: Walter & Israel GENERAL PATHOLOGY 7th ed.



Practice questions

1. Define haemorrhage. What are its causes?
2. Define petechiae and purpura.
3. What is haemothorax ?
4. What is haematoma?
5. How body responds to acute haemorrhage?

Thank You



2020/4/4