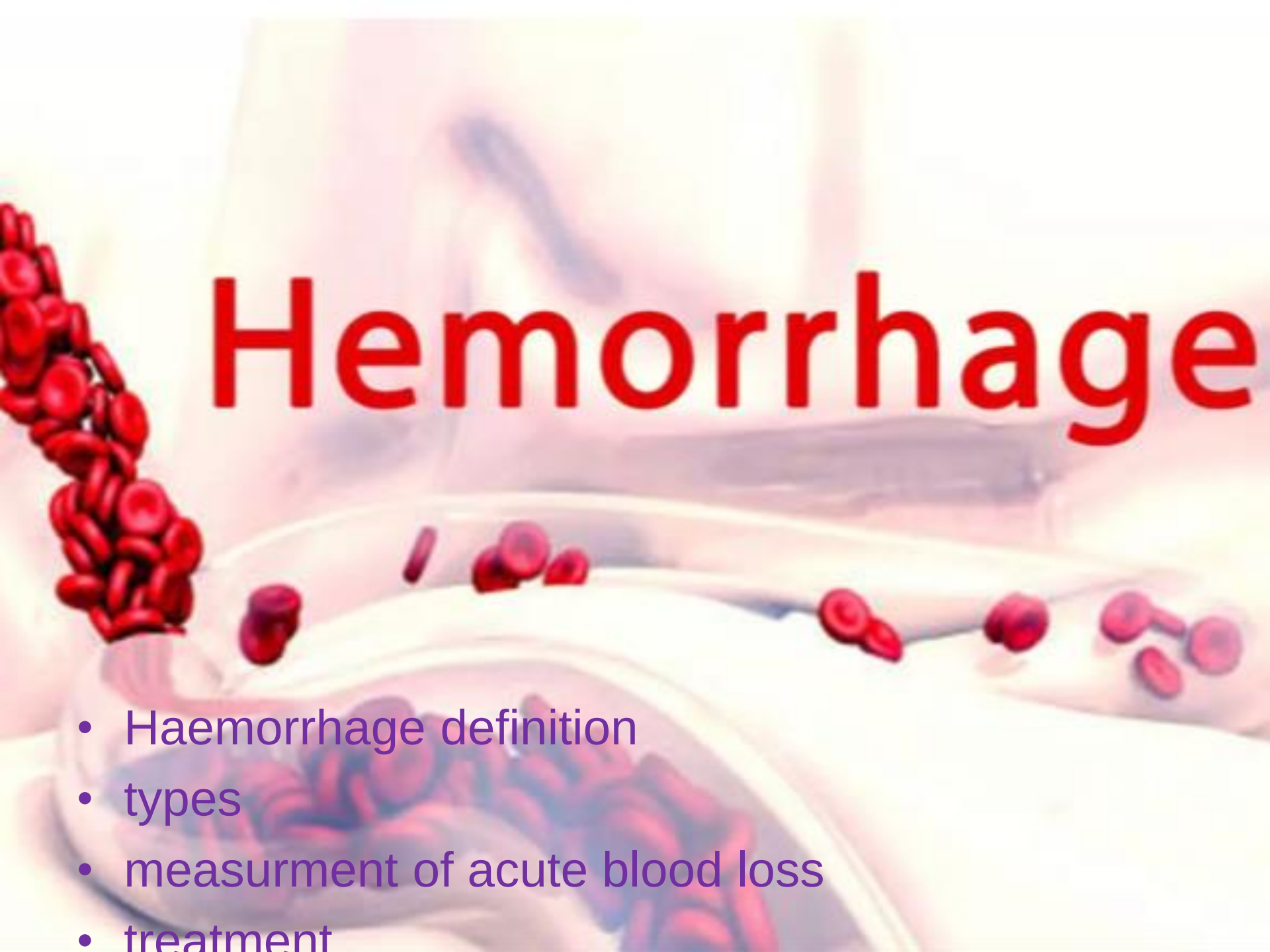
Dr.Zainab kadhum
senior ophthalmologist



- Haemorrhage definition
- types
- measurment of acute blood loss
- treatment

- an escape of blood from a ruptured blood vessel.
- Types of haemorrhages:

➡ -Regarding the source of bleeding

- 1- Arterial bleeding : Is recognized as bright red blood spurting as a jet which rises and falls in time with the pulse. In protracted bleeding and when quantities of intravenous fluids other than blood are given it can become watery in appearance

2- ***Venous haemorrhage*** : Is a darked red steady and copious flow. The color darkens still further from excessive oxygen desaturation when blood loss is severe or in respiratory depression and obstruction. Blood loss is particularly rapid when large veins are opened as a common femoral or jugular veins.

Arterial blood vs Venous blood

- lots of oxygen = **bright red**
- lots of CO_2 = **dark crimson**

- *arterial bleeding*
- *bright red*
- *spurting as jet rise and falls in time*

- *venous bleeding*
- *dark red*
- *steady*

- External haemorrhage : Is visible bleeding usually from opened wound called revealed haemorrhage.
- Internal haemorrhage : Called concealed haemorrhage as in ruptured spleen or liver, fracture femur, ruptured ectopic pregnancy or in cerebral haemorrhage. Concealed haemorrhage can become revealed haemorrhage as in

- Measurement of acute blood loss:
- Assessment and management of blood loss must be related to pre- existing circulating blood volume which can be derived from the patient's weight as in infant 80-85ml\kg and in adult is 65-75 ml\kg.

- In extensive wound and operations, the blood loss is grossly under estimated due to evaporation of water from swabs before weighing each batch. Blood, plasma and water also lost from vascular system because of evaporation from opened wounds, in to the tissue, sweating and expired water via the lung .
- In deed, for operations such as radical mastectomy or partial gastrectomy it may necessary to multiply the swab weighing total by factor 1 1\2. For prolonged surgery via a large wound as abdominothoracic or abdominoperineal operation the total measured may need to be multiply by factor 2.