Fourth Stage

General Surgery

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Lecture 4

Hemorrhage

Causes of acute Hemorrhage:

1-Congenital;like congenital bleeding disorder e.g hemophilia.

2- Acquired.

1 – Trauma (penetrating wound) .

2 – High pressure inside blood vessels (hypertension and varicose vein).

3 – Abnormal blood vessel (enurysm)

Types of hemorrhage:

A-According to sources:

1 – Arterial hemorrhage:

A – Bright red blood (colour).

B –it flows as a jet which rises and falls in time with the pulse (flow).

2 – Venous hemorrhage:

A– Dark red blood.

B-Steady and copious flow when rapid blood loss , especially when large veins are opened (femoral and jugular) .

3 –capillary hemorrhage

A- Bright red. B – Rapid and ooze. C – In Haemophilia, blood loss becomes serious if it continues for many hours.

B – According to time of hemorrhage:

1 – Primary Hg: hemorrhage occurs at the time of the injury or operation.

2 – Reactionary Hg: Hg that may follow primary hemorrhage within 24 hours (usually 4 – 6hr), mainly due to many **Causes**:

A – Slipping of a ligature.

B– Dislodgement of clot, especially in tonsillecting.

C – Cessation of reflex vasospasm.

Precipitating factors:

A– In case of Blood Pressure return to normal and refilling of venous system are recovery from shock.

B– coughing, vomiting leading to increase in venous pressure

3– Secondary hemorrhage: occurs after 7 – 14 days.

Causes:

A – Infection.

B – Sloughing of part of the arterial wall , predisposing factors are pressure of a drain tube , fragment of bone , a ligature in an infected area or cancer .

C – After arterial surgery and amputation

C- According to site of hemorrhage:

1 – External Hg: it is visible and revealed Hg. e g: penetration of skin by knife, piece of glass or bullet.

2 – Internal Hg: it is invisible and called **concealed** Hg e.g: Rupture of spleen or liver, ectopic gestation, fracture femur and cerebral Hg. **Concealed Hg may become revealed as in**:

A – Hematemesis or melena from bleeding of peptic ulcer.

B – Hematuria from a rupture kidney.

C – Vaginal bleeding from uterus during pregnancy.

Clinical feature of acute hemorrhage:

1 – Visible blood loss.

2 – Pallor, restlessness and increase pulse rate (rapid thready pulse) BP maintained first by compensatomy mechanism, when the bleeding continues or becomes sever causing hypotension.

3 –uncontrolled bleeding leads to air hunger (deep signing of breathless) clammy skin and empty vein, later on leading to thirst, tinnitus and blindness.

Hb level: After a few hrs Hb decreased due to hemodilution.

Treatment of hemorrhage:

A – Stop or minimize blood loss by:

1 - Pressure and packing .

2- Position and rest . Procedure (ligation, repair and excision) .

B – Restore blood volume by:

1 -Blood transfusion .

2 - Albumin 4.5 % , plasma , dextrain , gelatin .

3 - Normal saline and mannitol.

– Pressure: by dressing, pack, digital pressure as in epistaxis balloon to control the bleeding from oesophageal varice.

– Packing: by rolls of wide gauze which tied together to ensure complete removal later.

C-Position and rest:

1 – Elevation of limb in ruptured varicose veins.

2 – Bed elevator to raise the foot of the bed

(trendelenburg position) lead to increase venous return to the head lead to increase cardic output, this position used in stripping of varicose vein.

3 – Reverse trendelenburg position in thyroidectomy (tilted feet down wards).