NHS
The Leeds Teaching Hospitals
NHS Trust

Bleeding During Pituitary Surgery

Immediate Action

- Increase oxygen to 100%
- Clarify with surgeon target BP. Low BP may be required to identify bleeding but consider CPP
- Consider Adenosine to allow surgeon to identify bleeding point
- Activate major haemorrhage pathway
- Ensure adequate IV access, rapid infuser or second fluid warmer

Useful Drugs

Adenosine

Dose	0.3-0.6mg/kg
Example for 70kg	30mg

Mannitol

See Chart

Tranexamic Acid

Dose	1g

Ongoing Management 0-15 mins

Assessment

- Attempt to quantify total and rate of blood loss
- ABG
- Consider ROTEM if ongoing bleeding

Management

- If ongoing bleeding commence transfusion – O-ve if required.
- Maintain MAP at agreed level whilst ongoing haemorrhage
- Once haemostasis achieved increase MAP to improve CPP

Ongoing Management 15-30+ mins

Assessment

- Send blood for FBC, U&E + Clotting
- Repeat ABG
- Repeat blood loss assessment

Management

- Continue balanced transfusion as required
- Transfusion targets:
  - Hb > 70
  - APPT and/or PT Ratio < 1.5
  - Fibrinogen > 1.5 g/L
  - Platelets > 50 $x10^9$/L

- Ensure unused blood returned to fridge within 30 mins
- Prepare for potential move to IR once pituitary packed or bleeding stopped
- Inform ICU