The Leeds Teaching Hospitals NHS Trust

Intraoperative Aneurysm Rupture (in IR)

Immediate Action

- Communicate with interventional radiologist

  optimum BP (near baseline levels until haemostasis)
- Reverse heparin
- Optimise Cerebral Perfusion
  - Hyperventilate $PaCO_2$ - 4.0-4.5 kPa (for <30 mins)
  - PaO_2 >13 kPa PEEP <5cmH_20
  - Adequate depth of anaesthesia – propofol/opiate
  - Paralyse with a muscle relaxant
  - loosen collars/ties, neutral head
  - Mannitol

Useful Drugs

Protamine

Dose	1 mg/100 units heparin
	give test dose, then **slowly** at 5mg/min
	Dose reduced with time from heparin administration

Mannitol

Dose	See Chart

Ongoing Management 0-15 mins

Check ACT

Consider Mannitol

Maintain optimum BP- balance bleeding vs. cerebral perfusion

- Once haemostasis achieved consider increasing BP to maintain CPP with increased ICP and to check for leaks

Emergency Neurosurgical review

- Ensure EVD kit available

Prepare for Theatres

- inform theatre coordinator
- team preparing for emergency transfer
- consider switching to TIVA

Minimise $CMRO_2$

- Propofol/Thiopentone

Ongoing Management 15-30+ mins

Dependant on neurosurgical assessment

- CT
- EVD insertion
- Surgical clipping (rare)

Assessment

- ABG, Formal bloods (FBC, U&E, Clotting)

Ongoing Management

- Maintain euglycaemia, normothermia and control seizures
- Blood transfusion as required
- Inform and transfer to critical care