Guidance for the Management of Ruptured Abdominal Aortic Aneurysm

Vascular Registrar (VR) to inform starred consultant (8am to 6pm) or 3rd on call Anaesthetist (after 6pm)

Starred/On-call anaesthetist should review patient as soon as possible after arrival of patient in A+E

3rd on call to discuss with on call consultant anaesthetist as appropriate

Anaesthetist should liaise with VR asap after assessing the patient and a joint senior decision made as soon as practical regarding further management plan and ceilings of care

Decision for Open Repair

Decision for REVAR

Decision for Palliation

Consultant Anaesthetist will usually attend except in exceptional circumstances

In A+E:
2 x large bore cannulae, send G+S + x-match 6 units, FBC, fibrinogen level (either claus method or fibtem), U+E, VBG, 12 lead ECG

As soon as possible, but must not delay transfer to theatre:
Give ranitidine 50mg iv and metoclopramide 10mg iv
Urinary Catheter
Arterial line and further G+S sample.
Consider warmed fluid if MAP < 60mmHg
Prepare anti-biotics Gentamicin 5mg/kg and Teicoplanin 600mg

Ask ODP to prepare theatre with the following:
2 x fluid warmers (give all warmed iv fluids)
1 x rapid infuser
Nasal temperature probe
ODM/LidCO
Bair hugger
Infusion pumps (Syringe drivers x 3)
Cell saver (for open repair)
Entropy

Other considerations:
Appoint transfusion coordinator
Warn transfusion lab of possible major Haemorrhage
Liaise with ICU ASAP
Consider Vasc cath/PAC sheath
Use ROTEM™ if possible
Calibrate and use ACT if poss
Monitor and treat K+ level
### Open Repair

**Suggestions for preparation and management**

**GA** is almost always necessary

**Induction**
- Patient draped and surgeon scrubbed.
- Warming devices in place
- Cell Salvage Suction in place

Choice of agents:
- Midazolam and fentanyl +/- propofol or ketamine or other agent of choice
- Rocuronium or Suxamthonium

Anticipate cardiovascular collapse and have the following agents ready:
- Vasopressor to bolus (metaraminol or phenylephrine and ephedrine)
- Vasopressor infusion (noradrenaline 4mg in 50mls)
- 10mcg/ml and 100mcg/ml syringes of Adrenaline
- Rapid infusor primed and pressurised

**Maintenance**
- Aim to keep normothermic
- Suggest ABG every 30 minutes when unstable, or every 60mins when stable
- Monitor clotting ideally using ROTEM™ keep fibtem A10 >12mm
- Consider Bicarb 8.4% at 50mls/hr using syringe driver if measured bicarb on ABG is low and pH is low, especially if hypotensive (ie inotropes not working in acidaemic milieu). Control PaCO₂
- Consider tranexamic acid (can give up to 1g hourly)
- Check and treat K+ before X-clamp removal and reperfusion

### REVAR (decide whether opening will be considered if EVAR not possible)

**Suggestions for preparation and management**

**Awake** is usually appropriate to maintain abdominal tone before blood loss is controlled with stent deployment or intra-aortic balloon.

**Keep warm**
- Surgeons will use local anaesthesia
- Suggest use of remifentanil TCI approx 1-2ng/ml (or mls/hr if preferred) to calm, relax and analgesic effects.
- Anti-emetics, ranitidine, iv paracetamol

**If patient is very restless consider converting to GA once leak controlled.**
- Closure of femoral vessels and wound is often more painful then opening and cannulating vessels.

Consider ACT monitoring and heparin if blood loss minimal and procedure prolonged. (Suggested initial bolus of 75iu/kg aim for ACT approx 200 secs)

### Options for management of hypertension:
- Increase volatile anaesthetic
- Give further opioid analgesia
- Suggest try MgSO₄ up to 5mmols
- If HR high consider short-acting B-blocker
- GTN (boluses or infusion) For rapid control of transient BP rises draw up 2mg of GTN in 2 ml syringe and give 0.25-0.5ml boluses, titrate to response.