Guidance for the Management of Ruptured Abdominal Aortic Aneurysm

NHS
University Hospitals Sussex
NHS Foundation Trust

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 2 x G+S + x-match 6 units, FBC, coagulation (including fibrinogen, ideally send Rotem) U+E, VBG (or ABG), 12 lead ECG

As soon as possible, but must not delay transfer to theatre:
Urinary Catheter
Arterial line.
Warmed fluid if MAP < 60mmHg
Prepare anti-biotics Gentamicin 5mg/kg and Teicoplanin 600mg

Anaesthetist to assist with symptom control
Set up Morphine or Fentanyl PCA
+/- Midazolam
+/- Hyoscine

Ask ODP to prepare theatre with the following:

2 x fluid warmers (all iv fluids should be warmed)
Nasal temperature probe
Infusion pumps (Syringe drivers x 3)
Entropy (depth of anaesthesia monitor)
Bair hugger (top half)
Cell saver (for open repair)
1 x rapid infuser
Vasc cath + quad lumen CVP line

Other considerations:

Appoint transfusion coordinator
Warn transfusion lab of possible major Haemorrhage
Liaise with ICU ASAP
Monitor and treat K+ level
Use ROTEM™ if possible
Calibrate and use ACT if poss

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Open Repair

Suggestions for preparation and management

GA

Before Induction

Patient draped and surgeon scrubbed.
Warming devices in place
Cell Salvage Suction in place
Anticipate cardiovascular collapse and have the following agents ready:

- Vasopressors to bolus
- Vasopressor infusion
- Rapid infusor primed and pressurised
- Consider preparing 10mcg/ml and 100mcg/ml syringes of Adrenaline)

Maintenance

- Aim to keep normothermic
- ABG every 30 minutes when unstable, or every 60mins when stable
- Monitor clotting ideally using ROTEM™ keep fibtem A10 >12mm
- Give tranexamic acid (can give up to 1g hourly)
- Check and treat K+ before X-clamp removal and reperfusion
- If pH is low and measured bicarb on ABG is low, especially if hypotensive (ie inotropes not working in acidaemic milieu) give Bicarb 8.4% at 50mls/hr using syringe driver .
- Control $PaCO_2$

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, 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 180 secs)

Options for management of hypertension:

- 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.