

Framework for improving the results of elective AAA repair

Aim: To halve the elective mortality rate for AAA surgery in the UK (to 3.5%) by 2013

After consultation with the membership in March 2009, the Council of the Vascular Society of Great Britain and Ireland endorses the following framework for quality improvement in elective AAA surgery. Notes at the end of the guidelines will aid surgeons who may need to introduce changes to their vascular practice. A fuller version of the notes is available on the VSGBI website - www.vascularsociety.org.uk. The details of the framework are due for review in 2011.

The framework

Preoperative

- All patients should undergo standard preoperative assessment and risk scoring, including cardiac, respiratory, renal, diabetes, peripheral vascular disease, as well as CT angiography to determine their suitability for EVAR⁽¹⁾.
- Each hospital should have defined pathways for the correction of significant medical risks (cardiology/renal/respiratory) before intervention.
- All patients should be seen in preassessment by an anaesthetist with experience in elective vascular anaesthesia. At this stage, medication should be reviewed and optimised for the intervention⁽²⁾.
- All elective procedures should be reviewed preoperatively in an MDT that includes surgeon(s) and radiologist(s) as a minimum. Ideally, a vascular anaesthetist should also be involved to consider fitness issues that may affect whether open repair or EVAR is offered. Facility to offer both procedures should be available either in house, or by referral through an agreed pathway.

Operation

- Interventions should be undertaken (or supervised) by consultant surgeon/radiologist/anaesthetist with training and expertise in elective vascular procedures and a routine clinical practice in this specialty.
- Open AAA repair should include the following components: normothermia, cell salvage, rapid infuser, easy access to blood products (within 1 hour) and availability of haemostatic agents including glue⁽³⁾.
- EVAR should only be undertaken in a sterile environment of theatre standard, with optimal imaging facilities. A range of rescue stents and devices should be immediately available, together with the expertise to deploy them⁽⁴⁾.

A more detailed version of this document, the footnotes, and the data supporting the framework can be found on the VSGBI website:

Facilities

Elective AAA repair should only be undertaken in hospitals where:

- There is a 24/7 on call rota for vascular emergencies covered by consultant vascular surgeons, to ensure adequate postoperative care⁽⁵⁾.
- There is a critical care facility with ability to undertake mechanical ventilation and renal support, and with 24 hour on-site anaesthetic cover⁽⁵⁾.
- A minimum number of AAA procedures are undertaken. It is recommended that hospitals undertaking fewer than 20 elective AAA interventions per year (60 over three years) should not continue to offer these procedures⁽⁶⁾.
- Specialists undertaking aortic intervention should submit all their procedures to the National Vascular Database, and undertake regular review of their practice and outcomes (morbidity and mortality meetings).

Footnotes

- (1) *Specific recommendations for preoperative investigations and risk scoring will become available after investigation by the VS Audit and Research Committee.*
- (2) *Recommendations concerning perioperative medication will be available via the Vascular Anaesthesia Society (see VSGBI website).*
- (3) *Recommendations on the management of major haemorrhage have been published by NICE (www.nice.org.uk).*
- (4) *Details concerning equipment requirements are under consideration.*
- (5) *Cover may be provided within a centre, or by a local network. Centres without 24/7 vascular cover and/or without on site anaesthetic cover in critical care should either make the necessary rearrangements by the end of 2011, or transfer their elective aortic interventions to the nearest major vascular centre.*
- (6) *Hospitals that undertook fewer than 60 elective AAA procedures in 2006-8 inclusive should move their elective aortic interventions to the nearest major vascular centre. This is because it will never be possible to prove 'evidence of safety' for their aortic procedures. It should be noted that this is the initial recommendation concerning the known relation between volume and outcome. In future, outcome modelling done through the Audit Committee will probably result in the recommended volume of procedures being higher (Holt et al suggested 32, but evidence from North America suggests the minimum number of procedures per annum should be nearer 50).*

Vascular teams that cannot meet the requirements of the above framework should engage actively with service managers and commissioners to effect the changes required to develop safe and effective services that meet the local needs of their patients with vascular diseases.

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www.vascularsociety.org.uk