The Benefits of Comparative Audit in Vascular Surgery

There have been a number of recent registry reports on the outcome of surgery for both carotid artery disease and abdominal aortic aneurysm. The reports have been criticised for a lack of data validation, suggesting that such data may be of limited benefit. Indeed there is evidence from examination of national statistics that registry data contains bias due to under-reporting of adverse outcomes. This seems to be consistent across procedures in the UK.

The majority of national audits are collected by clinicians on a voluntary basis and all suffer from the same problem. These biases do not preclude using data from a number of countries for comparative purposes to draw useful conclusions about variation in practice and outcomes. Vascunet, a collaboration of international registries has been reporting since 1997. The reports have shown that some clear differences exist between nations in terms of practice (e.g. rates of intervention for asymptomatic carotid disease) and outcomes, such as mortality following open AAA repair.

The 2008 report showed that the UK was on outlier with excess mortality (7.8% in-hospital mortality in the UK national vascular database (NVD)) following open surgical repair of abdominal aortic aneurysm. The effect was immediate, with expressions of disbelief from UK vascular surgeons. This was despite other publications showing similar mortality rates around that time. Examination of the data failed to demonstrate significant differences in patients between countries, and was followed by general acceptance that the UK was an outlier compared to the rest of the Vascunet countries. Had this international comparison not been done the UK vascular surgeons may well not have picked up on this being a problem.

The consequence of this knowledge was the development of a quality improvement framework (QIF) by the Vascular Society of Great Britain & Ireland (VSGBI) (http://www.vascularsociety.org.uk/library/quality-improvement. html) setting a target to reduce mortality to 3.5% by 2013. Ratification of the QIF by members of the society initiated a grant funded quality improvement programme (QIP, www.aaaqip.com). The QIP has set standards for assessment and care delivery for the VSGBI and is encouraging improved data entry. A validation exercise is in process to validate current mortality data and provide the membership with reliable data with which to assess progress. Discussion with surgeons from Vascunet countries identified that preoperative assessment standards were higher in many countries, involving formal anaesthetic input, compared to the UK.

The latest data available is for the last two years to October 2010. This shows an overall in-hospital mortality of 3.7% nationally in the English national vascular database (NVD) and 4.7% in the corresponding national administrative dataset (HES). The corresponding rates for open repair are 5.6% and 6.9% (NVD and HES). For EVAR the rates are 2.4% and 3% (NVD and HES). Clearly things are starting to improve, but there is no room for complacency and we need to continue to work to reduce the mortality associated with aneurysm repair.

Vascunet and the Vascular Society believe that international comparative audit has been good for UK vascular surgeons. It has dispelled fixed attitudes about the quality of care we provide, and we are beginning to show improvement. This will have benefits for our patients, not just in terms of outcome, but also in the change to our processes, increasing patient communication and ensuring that patients’ are brought to optimal fitness prior to intervention.

Comparative audit can highlight variation in practice, and stimulate quality improvement. Vascunet offers a natural home for national audits to compare data and would welcome new member countries.

References


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