Many rural areas in Ireland, like the United Kingdom, are remote from large vascular units and have large elderly populations with a high incidence of vascular disease. Non-specialist vascular units can only be justified in these areas provided the results obtained are on par with larger centres.

We are currently evaluating our results of extracranial vascular reconstruction from a similar non-specialist setting using POSSUM and P-POSSUM as predictors of outcome. The number of cases performed per year does not necessarily indicate excellence.[3] Non-specialist vascular surgery units, in particular, must be the subjects of regular and transparent audit in order to justify their existence and the service they give to their local population.

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Patient Scoring Systems

Author's Reply

I thank Brady and Joyce for their constructive comments. Measurement and comparison of morbidity and mortality as a quality index is useful but far from optimal given the inherent limitations of the POSSUM as discussed in our article.[1] The variables need to be better adjusted and corrected to the surgery in hand rather than utilising irrelevant data[2] e.g. the POSSUM variable "cancer staging" seems redundant in patients undergoing vascular surgery. Others have adopted the Veterans Administration National Surgical Quality Improvement Program in North America as a more comprehensive model regarding case mix adjustment but which scoring system to use remains a dilemma.[3] Nonetheless, the overall purpose of any scoring system is the accurate prediction of outcome, which could influence treatment decisions and rationalise resources.

I agree with authors that this process should be undertaken on a regular basis in a "blame-free" environment. In reality, all surgeons should now be trained to deliver the best quality of clinical care, given the improved structure of surgical training. It is those same surgeons, trained in tertiary centres under the supervision of experts, that now are operating in district hospitals serving a sometimes skewed sample of the population. Cook *et al*. has noted that 14% of patients fell within the high-risk category (>50% mortality predicted) at a district hospital compared with only 8% at a teaching hospital.[4]

So why should a difference in morbidity and mortality outcome still exist among us? The current attempts by the surgical community to answer such questions seems vital. I recommend that we should identify potentially confounding variables before adopting additional predictive variables. We should also recognise surgical errors as an important variable, with the potential for improved performance through critical incident reporting. Toni Lerut, President of the European Surgical Association, has stated that "the quality of surgical training is the single most important factor in reducing intra-surgeon variation".[5] A well-trained and well-supervised trainee should obtain results equal to a senior surgeon.[6]

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Haemorrhage Associated with Combined Clopidogrel and Aspirin Therapy

Sir,

Antiplatelet therapy with clopidogrel (Plavix™) is at

least as good as aspirin in reducing the risk of ischaemic events in patients with coronary, carotid and peripheral vascular disease, with the advantage of fewer gastrointestinal side effects.[1] Combined therapy using clopidogrel and aspirin further reduces the risk of thrombosis and re-occlusion after percutaneous coronary artery stenting.[2] A recent adverse event has caused us concern with regard to the increased use of such combined therapy. The elective repair of an 8 cm infrarenal abdominal aortic aneurysm in an 82-year-old man was complicated by early, diffuse haemorrhage that failed to respond to protamine, whole blood, platelets, and FFP. A degree of control was finally achieved with aprotinin; but the patient died eight days later of multiorgan failure.

We believe that combined therapy caused or contributed to this patient's coagulopathy and consider that this will be of increasing relevance as more patients are treated with this relatively new drug. We have instituted a departmental policy concerning the perioperative use of combined therapy and would be interested to hear of any similar complications experienced by colleagues in other centres.

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Editor's Comment

The Editor is aware of at least two other cases where combined aspirin and clopidogrel therapy caused excessive blood loss during carotid endarterectomy. Vascular surgeons who have also encountered this problem should inform the relevant national regulatory authority. In the U.K. this is the Committee for the Safety of Medicines.

Jonathan Beard
Senior Editor

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