

CORRESPONDENCE

Scoring Systems

Sir

I was interested in the question posed in the title of the paper by Elfström and colleagues, "Adjusting outcome measurements for case-mix in a vascular surgical register – It is possible and desirable?" (*Eur J Vasc Endovasc Surg* 1996; **12**: 459–463) but was unable to find an answer in its text. However, I believe that such a question can be answered if the correct tools are used. The two outcomes, mortality and graft patency, must be studied separately.

Considering mortality, I do not know Sweden well, but I would be surprised if the assumption that the populations in the different catchment areas are the same was true. Homogenous spreading of age groups and social groups throughout a country is rare in Western societies and some figures should have been produced to justify this statement. Regardless of this, I would agree that the methods used of registration were too crude to assess the preoperative physiology of the patients. Although a cardiac index, as suggested, might be useful, the "Physiological" score from the POSSUM system¹ is simple to collect and will assess non-cardiac physiology in addition to the cardiac status of the patient. This by itself can be used to accurately compare patient populations.

Addition of the "Operative Severity Score" from the same system and interpretation of the results by recognised techniques² will result in an expected mortality rates against which observed mortality rates can be compared. This will then provide the answer as to whether case-mix or the "other explanations" suggested are of most importance.

Turning to graft patency, the authors also state that "... patency rate is too multifactorial a variable to be comprehensively analysed in a clinical quality register." Copeland *et al.* have gone some way to overcome this by devising a system (GORA) that quantifies the risk of graft occlusion using only five factors.³ Once again this produces a predicted rate of occlusion with which to compare observed rates from different surgeons, institutions or using different techniques.

In conclusion, the answer to the question in the title is yes, the adjustment of outcome measures is desirable if it can be done accurately and the tools for doing so are now becoming available.

M.S. Whiteley

*Clinical lecturer in Surgery
Oxford, U.K.*

References

- 1 COPELAND GP, JONES D, WALTERS M. POSSUM: a scoring system for surgical audit. *Br J Surg* 1991; **78**: 356–360.
- 2 WHITELEY MS, PRYTHERCH DR, HIGGINS B, WEAVER PC, PROUT WG. An evaluation of the POSSUM surgical scoring system. *Br J Surg* 1996; **83**: 812–815.
- 3 COPELAND GP, EDWARDS P, WILCOX A, WAKE PN, HARRIS PL. GORA: a scoring system for the quantification of risk of graft occlusion. *Ann R Coll Surg Engl* 1994; **76**: 132–135.

Authorship of Papers

Sir

I was surprised to read the article "Treatment of an Aneurysm of the Coeliac Axis by Transluminal Steel Wire Occlusion" (*Eur J Vasc Endovasc Surg* 1997; **13**: 88–90), where a case of coeliac artery aneurysm embolisation was reported by my surgical colleagues, implying that the work had been done by them. The first author, Professor Rengo, consulted me on this case. However, it was my suggestion to perform embolisation which was carried out by myself and my interventional radiology colleague, Dr Phillipio Salvatori. The description of the technique in Rengo *et al.*'s paper is the exact transcription of my report. I am disappointed that Professor Rengo did not credit his interventional radiology colleagues with the technique and include our names in the report or acknowledge us at the end of the report.

Many vascular surgeons have concerns about the endovascular treatment of endovascular lesions by interventional radiologists or by cardiologists, without