One limitation of this study was the relatively small number of patients especially in the high-risk group patients and the first decade patients from a single institute. Because the number of high-risk patients may continue to increase, we should continue to collect data to verify the observations of this study. Although the logistic model has been recognized as a better model for high-risk patients group [3,4], we demonstrated that the EuroSCORE was a valuable model for measuring the quality of surgical care in aortic surgery in Japan.

In conclusion, although both the additive and the logistic EuroSCOREs reliably predicted the operative mortality for thoracic aortic surgery, the logistic EuroSCORE was better than the additive EuroSCORE especially in predicting the operative risk in the very high-risk group. Risk stratification using the EuroSCORE helped us to improve the quality control of surgical treatment for thoracic aeurysms.

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References


Editorial comment

EuroSCORE and the Japanese aorta

In this paper, [1] Nishida and colleagues have reviewed 327 patients who have undergone surgery of the thoracic aorta in their hospital and stratified them using EuroSCORE (both logistic and additive versions). They found that both models work well in this patient population but that the logistic model is superior in the higher risk group. They also found that the logistic model remains well calibrated in this Japanese thoracic aortic surgical patient group.

The study has some weaknesses. It is from a single institution and therefore, when such studies purport to assess a risk model they may end up telling us more about the institution and its performance than about the risk model itself. Some of the data collection must have been retrospective as EuroSCORE was not available at the beginning of the thoracic aortic surgical experience as reported in the study. The authors duly recognise the limitation of the relatively small number of patients. They are perhaps a little too self-critical in that respect: the paper deals with a highly selected subset of cardiac surgical procedures and 327 patients is a very respectable number of operations on the thoracic aorta. Finally, the conclusion that the logistic model works better in high-risk patients is one that is already well known and documented in general cardiac surgery, so it is not surprising to find this fact confirmed in surgery of the thoracic aorta. Indeed, thoracic aortic surgery is in itself a relatively higher risk subgroup of cardiac surgery; so logistic models in general are better suited to such a patient population than additive models [2].

The interesting findings in this study are that, even within a small patient subgroup such as this, we have a risk model which is still capable of differentiating risk strata and that the model remains well calibrated in this cohort. This is despite several recent reports of overscoring and claims that the model may soon be out of date. That EuroSCORE remains valuable for measuring the quality of surgical care in aortic surgery in Japan and that its discriminatory power has, if anything, increased with time over the last three decades are new findings which are both interesting and satisfying. Nevertheless, it has to be recognised that the data from which EuroSCORE was originally constructed are now 10 years old. The results of cardiac surgery have changed in the last decade. There is evidence from the United Kingdom [3] and elsewhere that around the year 2002, cardiac surgical outcomes have improved significantly despite a general tendency towards operating on older and sicker patients. Undoubtedly, the time has come for a re-evaluation of the risk model and the EuroSCORE project group are in the process of developing this re-evaluation. The current tendency is towards a repeat exercise in data collection which may be worldwide rather than confined to European countries. Institutions with an interest in participating in this venture are encouraged to register their interest with the project group.

Finally, the authors conclude that risk stratification has helped them improve the quality control of thoracic aortic surgery. I agree with them and would go even further:
without measuring actual and predicted outcomes, there can be no quality control.

References


Samer A.M. Nashef*
EuroSCORE Project Group,
Papworth Hospital, Cambridge CB3 8RE, UK
Tel.: +44 1480 364299; fax: +44 1480 364744
E-mail address: sam.nashef@papworth.nhs.uk
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