Author's response to reviews

Title: A comparison of outcome among patients seen by Cardiologists and General Physicians after acute myocardial infarction

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22nd July 2004

Editor,

Dear Sir,

Please find enclosed the revised version of our paper for publication in your journal. We have made changes to the article in view of the reviewer's report. All the changes are written in red font to facilitate the peer review process.

Comment:
"The authors state eligibility criteria for drug treatments (except ACE inhibitors) but not for procedural interventions - why not? Comparing cardiologist with general physician use of the latter is invalid unless there is adjustment for patient ineligibility (esp as the general physicians looked after older patients with greater prevalence of smoking, functional disability and other co-morbidities) and access to such interventions."

Response:
We did not state the eligibility criteria for procedural interventions because the physicians and surgeons did not use or record the use of any formal criteria for eligibility. We did however base our data collection tool on the Appropriateness of Revascularisation (ACRE) Study (Hemingway H et al 2001) questionnaire and collected data on important aspects such as functional disability, co morbidity and smoking. We analysed the information in a univariate model and the only significant variables were the presence of co morbidity and age. We therefore presented multivariate models controlling for the effect of co morbidity and age. We have now stated in the discussion that the inability to use formal appropriateness criteria limits the ability to interpret findings. However we believe that controlling for important eligibility criteria such as co morbidities as potential confounders in a multivariate model allows us to compare cardiologists and general physicians.

Comment:
"Other bias may relate to differences in the level of completeness of medical records between the two hospitals given this was a retrospective chart review (eg were there significant differences between the two in frequency of recorded variables for determining patient eligibility?)"

Response:
There were no significant differences and this is now stated in the results section of the paper. We have not reposed the details of the significance tests for each variable due to obvious limitations in space for a publication. This can be provided if the reviewer wants access to the data.

Comment:
"The authors state their objective is to assess 'the effect of access to cardiologists on survival among AMI patients' but Methods says nothing about the provision of cardiology services in either of the study hospitals, their respective AMI caseloads, the numbers of cardiologists and general physicians per patient, the referral links (if any) between the two hospitals, the skill mix and training levels of the junior medical staff, the formal use of audit and other quality improvement strategies. As the authors note in discussion, all these factors may justify the view that 'access to a cardiologist may be a proxy measure of access to effective treatment (or care) and may not (of itself) be the trigger for effective treatment.'"

Response:
The main message of our paper is indeed "access to effective medication is the explanation for differences in survival and not access to cardiologists". We have now included details on the cardiology services in the two hospitals - box 3. We have also clarified that the procedures for both hospitals are actually conducted in same cardio-thoracic hospital situated in a town between the two study hospitals. We believe that in this instance it is justifiable to combine the data from the two hospitals and to study in a robust multivariate model the differences in characteristics of patients and physicians that may account for differential access to procedures or survival.

We hope these changes will allow you to publish the paper. Finally, my thanks to the reviewer for their comments.

Yours sincerely
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