

Ischemic Heart Disease Lethalities in the State of Rio de Janeiro Between 1999 and 2003

Dear Editor,

We read with interest the article from de Oliveira et al. released in February 2006 of "Arquivos Brasileiros de Cardiologia"¹ and would like to make some comments on the assumptions made by the authors regarding the classification of the severity of the underlying heart disease of the subjects undergoing CABG, stenting and clinical treatment.

The authors comprehensively examined data from SIH-dataSUS and classified the severity of the disease according to the diagnosis of patients on hospital admission, as angina, acute myocardial infarction (AMI), and ischemic heart disease (IHD), either acute or chronic, and developed their discussion based on.

Although, in a general way, it may be a commonsense in our community to consider patients admitted with the diagnosis of AMI to have a more severe disease than those with angina or chronic IHD, we raise some serious concerns on this line of thought. For instance, on presentation, patients with an AMI with a left anterior descending coronary artery obstruction usually have a worse prognosis than patients with posterior descending right coronary artery disease. Patients in Killip-Kimball class II or III do have a worse prognosis than those in class I, and those with three-vessels disease have a more unfavorable outcome than those with one- or two-vessels disease. Furthermore, it is highly probable that patients undergoing CABG have a more severe and more extensive disease even before the procedure than those undergoing stenting or under clinical treatment. Stenting is preferably performed in patients with one-vessel disease rather than multi-vessel disease. Therefore, it is not surprising that patients undergoing CABG have a higher lethality in IHD than stenting.

Although neither functional nor clinical information regarding patients' status in the SIH-dataSUS were taken into account in the assessment of data presented, the authors paralleled and implicitly considered clinical classification as a measure of the severity of patients' clinical conditions, which is definitely not the same. Taking into consideration disease severity as admission diagnosis should have caused significant statistical bias.

Since the severity of the disease was not considered in the article, it is impossible to correctly assess whether patients have died due to risks of surgery treatment or if pre-operative status have impacted the outcome. On the other hand, assuming that actual clinical presentation paralleled diagnostic classification and was evenly

distributed, authors' recommendation of reserving highly complex procedures for the more serious cases would result in increasing lethality in surgery groups.

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1. Oliveira GMM, Klein CH, Silva NAS, Godoy PH, Fonseca TMP. Letalidade por doenças isquêmicas do coração no Estado do Rio de Janeiro no período de 1999 a 2003. Arq Bras Cardiol. 2006; 86: 131-7.

THE AUTHORS REPLY

Dear Editor,

Regarding the comments made by reader(s) of the article "*Letalidade por doenças isquêmicas do coração no estado do Rio de Janeiro no período de 1999 a 2003*" ("*Lethality due to ischemic heart diseases in the State of Rio de Janeiro, from 1999 to 2003*")¹, we would like to clarify the following: in the three first paragraphs of the discussion we listed all the limitations of the database used for the study, recognizing the need for more specific information on the clinical status of patients, comorbidities and risk factors that would allow us to develop more accurate adjustment scores.

Information such as the number of coronary vessels injured, sites of the lesions or the Killip-Kimball classification are not included in the DATASUS database. Therefore, throughout the study we made reference only to hospital admissions, not to patients. Moreover, it was not our intention to compare coronary artery bypass graft, which obviously is expected to cause higher lethality, with coronary angioplasty. We merely emphasized the ample variation in lethality rates, but were not surprised by the differences between the rates of lethality for CABG and PTCA.

There are no databases in Brazil that provide clinical information about all CABG procedures performed, especially surgical acts. Regarding coronary angioplasty, the CENIC database (National Center of Cardiovascular Investigation) receives information voluntarily provided by its members who are authorized to perform percutaneous

procedures, but without breaking down information on interventions paid by SUS, by health insurance, or by private users. However, CENIC data are not complete as they recorded 25,505 PTCA performed in Brazil during the year of 2003, whereas DATASUS alone reported 30,666 PTCA paid by SUS in the same year.

On the other hand, although data about AIHs (hospital admission authorization records) do not include clinical information, there are enough highly reliable data that can be used for studies on the lethality of procedures. No one omits these procedures from the AIH database or performs them with another code. Lethality is another reliable item of information, as no one reports a death that has not occurred.

The study did not intend to directly assess the severity of the clinical status of patients at presentation, nor could this be done. In view of the lack of Brazilian clinical trials, we tried to analyze, understand and interpret the existing data in order to consider which would be the best approach within our context. This type of analysis or interpretation of existing data is widely used in social theory (sociology) and in history. Studies are interpreted by placing them within the context and limiting them [making them temporary], while at the same time trying to bring to the discussion the problem of "tacit understandings" that are taken as truth (in this case, the so-called benefit of a given medical technology), using, therefore, principles of ethnomethodology.

Although we do not have the so insistently requested clinical data on patients, the fact is that lethality is on rise, mainly in surgical revascularization procedures, and this can not be questioned unless deaths that did not occur are being registered in the AIHs, something we think is unlikely.

Under these circumstances, if we were to suppose that lethality was high due to the fact that 1) a great number of patients in severe conditions was admitted to the hospital, be it because the waiting list was long and the ventricular function was deteriorating or because there was a large number of comorbidities concomitant with severe

ventricular dysfunction and several coronary injuries, and 2) if we took into consideration the concept of "minimum performance standards", that is, if technology is used with outcomes worse than the minimum established, technology will not be able to benefit the patients and, in view of the results reported in the study, it would be better that procedures were not applied to these patients admitted to the hospital.

As to the recommendations of highly complex procedures for the most severe cases, indications for surgery are fully established for "high risk" cases, as discussed in the article, provided they are carried out under "minimum performance standards". However, if the procedure is done according to the performance level reported in the study, even high-risk cases would not benefit from it.

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1. Oliveira GMM, Klein CH, Silva NAS, Godoy PH, Fonseca TMP. Letalidade por doenças isquêmicas do coração no Estado do Rio de Janeiro no período de 1999 a 2003. *Arq Bras Cardiol.* 2006; 86: 131-7.
2. Barbosa PRB, Issendorff PV. Letalidade por doenças isquêmicas do coração no estado do Rio de Janeiro no período de 1999 a 2003. *Arq Bras Cardiol.* 2006; 86: 472.