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Postoperative complications of coronary artery bypass graft in elderly patients

Reply of the letter to the editor

We wish to thank Dr. Hécio Griffhorn for his interest in our work.

We have shown that octogenarians present a longer stay, higher incidence of complications and higher mortality, with worse peri-operative severity of illness. However, nonelderly and sexagenarian patients had similar performance, disclosing increased life expectancy and quality in Brazilian population.⁽¹⁾ Septuagenarian were characterized by hybrid results, showing increased severity of disease, higher incidence of postoperative atrial fibrillation and reoperation, however ICU length of stay and mortality were similar to those of younger groups. Worse performance of elderly can result from need for urgent surgery, efforts to prolong treatment with drugs and coronary angioplasty procedures. Blood transfusion was more often used at preoperative of septuagenarians and octogenarians (critical levels of anemia with advanced age or greater use of blood products may significantly influence outcomes).^(2,3)

The study included only patients submitted to coronary artery bypass graft (CABG) as the main surgery although a significant number also had an indication for valve replacement, secondarily. As commented, mortality of CABG patients who needed valve replacement is higher (15.5%). There were 61 orovalvular surgeries during the study's period, with 6 deaths, but they were excluded because we wanted to specifically analyze a homogeneous group of CABG. Presence of aortic valve disease may increase surgical and extracorporeal circulation (ECC) duration, however there was no impact on the incidence of complications, perhaps due to exclusion of most orovalvular surgeries. Of the 343 cardiac surgeries in this time period, 11(3%) were performed without ECC. Duration of surgery and morbidity may be less frequent with this approach,⁽⁴⁾ but could increase heterogeneity of the study group. Decision of the operation technique always rested upon the surgical team before admission.

If the complications most often found in elderly (atrial fibrillation, left ventricle failure, significant thoracic bleeding, acute renal dysfunction and nosocomial sepsis) were added to high frequency of urgent surgeries and longer time of ECC, there are reasons for higher morbidity and mortality of elderly patients.

Finally, postoperative transient inflammatory reaction that comes together with ECC was analyzed in some studies. Cytokines, as macrophage migration inhibitor factor, interleukin 6 and monocyte chemoattractant protein, undergo a significant early increase after induction of anesthesia and return to baseline levels after 24 hours, and⁽⁵⁾ correlate with levels of organ dysfunctions. Researchers are looking for predictive biomarkers of postoperative morbidity, mainly in the elderly.

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