Table 2
Comparison of Clinical Events in Patients With and Without Intra-aortic Balloon Counterpulsation

	With IABC (n=26)	Without IABC (n=71)	*P*
Major in-hospital hemorrhage, %	19.2	28.0	.378
Heart failure during hospitalization, %	23.1	12.0	.171
Reinfarction during hospitalization, %	11.5	1.3	.021
Cerebral infarction, %	3.8	6.7	.600
In-hospital death, %	69.2	56.0	.236

IABC, intra-aortic balloon counterpulsation.

Therefore, to conclude, IABC use should not be generalized in patients with STEMI complicated by cardiogenic shock undergoing percutaneous coronary intervention. More studies are needed to clarify when IABC can be of use, as well as to identify the benefits of ventricular assist devices in reducing mortality and events in this patient group.

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Available online 6 April 2013

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http://dx.doi.org/10.1016/j.rec.2013.01.010

Disease Burden Attributable to Major Risk Factors in Western European Countries: The Challenge of Controlling Cardiovascular Risk Factors

La carga de enfermedad atribuible a los principales factores de riesgo en los países de Europa occidental: el reto de controlar los factores de riesgo cardiovascular

To the Editor,

The description and detailed evaluation of the magnitude and distribution of diseases and risk factors, acknowledging their specific characteristics, are important for establishing strategies that make it possible to improve the health of the general population. Although in recent decades enormous advances have been made in the analysis of the effects of risks on our health, mortality assessments have historically been the indicators used to evaluate the health of populations, and even to define their degree of social and human development.

During the 20th century, there was a considerable decrease in mortality in every country of the world, and especially in the most highly developed nations. Consequently, the measurements of mortality have decreased sensitivity to detect changes in the health of populations, and the need to use alternative indicators is becoming increasing evident. The burden of disease, the major indicator of which is the number of disability-adjusted life-years, measures the health losses in the population that represent both the fatal and nonfatal consequences of diseases and the risk factors associated with them. The advantage of using disability-adjusted life-years with respect to other measurements is that it offers the possibility of condensing the entire set of epidemiological data on each disease or risk factor (mortality, prevalence, disability, severity) into a single indicator. It can be used to measure and compare the health of different populations or social groups, study the changes in the health of a population or the magnitude of a health problem over the course of time, enable the utilization of these findings as a tool in the definition of health priorities, or even to evaluate the impact of certain health interventions.[1,2]

Specifically, the Global Burden of Disease study was the first to establish a systematic evaluation of the changes in population health resulting from the modification of a group of risk factors. More recently, new epidemiological estimates of the health losses attributable to 67 risk factors have been published for several regions, in what constitutes the largest collaborative effort of its kind to date.[3] Despite the uncertainties inherent in quantifying disease burden, the new estimates show that the loss of health in Western European countries is strongly affected by cardiovascular risk factors (smoking, hypertension, overweight and obesity, and alcohol consumption, among others) that continue to be widespread and have a great impact on health.

Using the information provided in the databases of the Institute for Health Metrics and Evaluation[4] (http://www.healthmetricsandevaluation.org/) and applying meta-analysis techniques that weight the measurements using inverse variance, we quantified the health losses (on average) attributable to the major risk factors in Western European countries. The cross-sectional comparison of the population impact in 1990 and 2010 (Figure) shows that, while the prevalence of risk factors like hypertension, smoking, alcohol consumption, and hypercholesterolemia appears to have decreased in absolute terms, they continue to be the major contributors to the burden of mortality and disability in the European region. However, it seems that these potential improvements have been eclipsed by

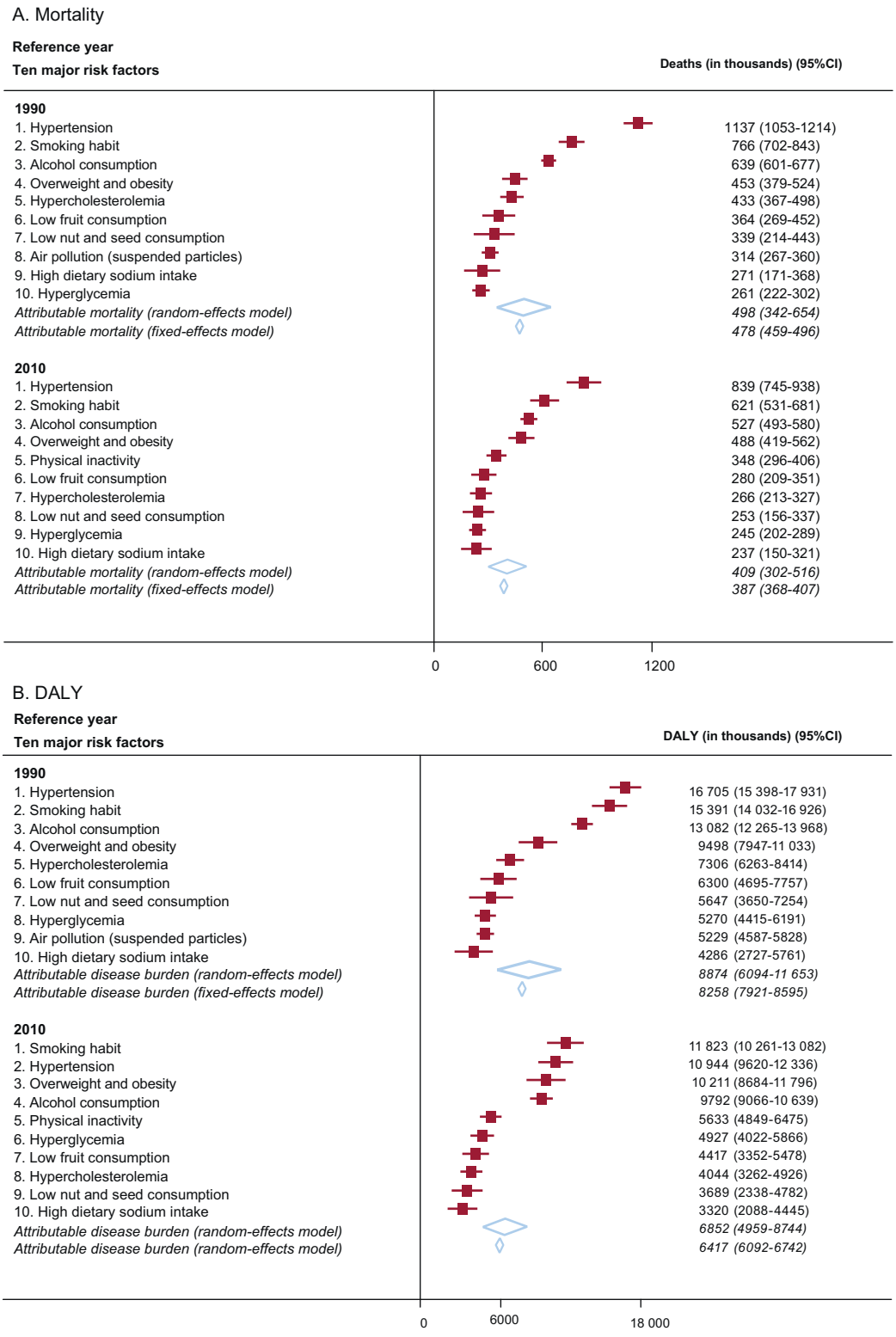

Figure. Disease burden attributable to the 10 major risk factors in Western European countries, 1990 and 2010. 95%CI, 95% confidence interval; DALY, disability-adjusted life-years.
Source of information: Institute for Health Metrics and Evaluation, 2012.[4]

the increases in the disease burden attributable to overweight, obesity, and physical inactivity.

After decades of efforts to call attention to the disease burden attributable to cardiovascular risk factors,[5,6] these findings represent an important step toward their complete and critical description. This epidemiological evidence should be expected to direct the debates on the new challenges for maintaining and promoting cardiovascular health in the coming years, as well as specific actions that enable the application of multidisciplinary approaches to the prevention and management of the risk factors and their associated comorbidities. Given the complexity of this issue and the fact that the interactions among the determinants of health vary from one context to another, progress in the attempts to control cardiovascular risk factors will require sustained efforts on a regional, national, and international scale.

FUNDING

The authors received research grants from the Spanish Health Research Fund (*Fondo de Investigación Sanitaria*), *Instituto de Salud Carlos III* (project no. PS09/086).

CONFLICTS OF INTEREST

The opinions expressed in this letter are the responsibility of the authors and, thus, do not necessarily reflect the point of view of the organizations in which they work. The authors declare that they have no conflicts of interest.

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Available online 7 May 2013

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http://dx.doi.org/10.1016/j.rec.2013.01.012

Prevention of Opioid Withdrawal Syndrome After Pediatric Heart Transplantation: Usefulness of Dexmedetomidine

Prevención del síndrome de abstinencia en el postoperatorio de trasplante cardiaco: utilidad de la dexmedetomidina

To the Editor,

Opioids and benzodiazepines are the sedative and analgesic drugs of choice for pediatric patients in cardiac intensive care units. Long-term use of these drugs is associated with the development of withdrawal syndrome. In pediatric patients this is difficult to diagnose due to a wide range of nonspecific symptoms and the scarcity of validated diagnostic scales. In pediatrics, incidence of withdrawal syndrome is 35% to 57%; the greater the accumulated dose and length of treatment, the more frequently it occurs.[1] Accumulated doses of phentanyl of >1.6 mg/kg or >5 days of infusions are associated with developing withdrawal syndrome; with doses of >2.5 mg/kg or >9 days of infusions, incidence of up to 100% has been described.[2]

In pediatric heart transplantation, due to the scarcity of donors the waiting list times increase, extracorporeal circulatory support becomes necessary, cardiac intensive care units stay lengthens, and the probability of developing withdrawal syndrome increases.[3] Dexmedetomidine, an α_2-adrenergic agonist, is a sedative and analgesic with possibly beneficial effects in controlling withdrawal syndrome.[4] As both a sedative and analgesic agent that does not cause depression of the respiratory center, it has gained widespread acceptance for use in pediatric cardiac intensive care units in the USA. Numerous publications report its efficacy and safety.[5] However, evidence of its use in preventing withdrawal syndrome, particularly in the cardiac posttransplantation period, is scarce.[4]

We describe our experience with dexmedetomidine in managing withdrawal syndrome and supporting opioid discontinuation in 2 pediatric heart transplant recipients.

Case 1. Infant aged 11 months transplanted for dilated cardiomyopathy due to myocarditis, who had required 7 days of extracorporeal membrane oxygenation support and ventricular assist device implantation during the 20 days preceding transplantation. Sedation and analgesia were administered in a continuous infusion of opioids, benzodiazepine, and propofol. The patient experienced withdrawal syndrome and morphine dosage could not be reduced despite having started the standard management protocol. The accumulated opioid dose was 1.39 mg/kg in 33 days. We decided to start treatment with dexmedetomidine in continuous infusion with an initial dose of 0.75 μg/kg/h and maximum of 1 μg/kg/h, enabling us to rapidly reduce the opioid without withdrawal syndrome reappearing (Figure A). The patient remained hemodynamically stable after