Reviewer's report

Title: Circadian analysis of myocardial infarction incidence in an Argentine and Uruguayan population

Version: 1 Date: 11 October 2005

Reviewer: Roberto Manfredini

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

The Authors demonstrated the existence of two main peaks (at morning and afternoon hours) in the incidence of MI. This is not a novel observation, but the first confirmation in Argentine and Uruguayan population. The double-peak distribution of MI was reported more than a decade ago by several investigators (Peters RW et al. Identification of a secondary peak in myocardial infarction onset 11 to 12 hours after awakening: the Cardiac Arrhythmia Suppression Trial (CAST) Experience. J Am Coll Cardiol 1993; 22: 998-1003; Behar S et al. Circadian variation and possible external triggers of onset of myocardial infarction. SPRINT Study Group. Am J Med 1993; 94: 395-400), with fatal infarctions being prevalent in the morning span (Manfredini R et al. Influence of circadian rhythms on mortality after myocardial infarction: data from a prospective cohort of emergency calls. Am J Emerg Med 2004;22:555-9). At least the paper by Peters et al should be cited in the reference section.


The authors explain the prevalence of afternoon episodes in their population with the common practice of prolonged afternoon siesta. Afternoon siesta, in fact, may act as a triggering factor, especially in elderly subjects (Bursztyn M et al. The siesta and ambulatory blood pressure monitoring: is waking up the same in the morning and afternoon? J Hypertens 1996;10:287-92; Bursztyn M et al. The siesta in the elderly: risk factor for mortality? Arch Intern Med 1999;159:
Finally, the method of analysis may be rather complicated for readers not familiar with chronobiology. Probably, instead of cosinor analysis and superimposed gaussian curve, partial Fourier series with multiple harmonics (Mojón et al, Chronolab: an interactive software package for chronobiologic time series analysis written for the Macintosh Computer. Chronobiol Int 1992;9:403-12) could have been more easily used.

What next?: Accept after discretionary revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests