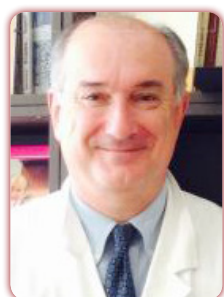


JOINT EVENT ON
24TH WORLD CARDIOLOGY CONFERENCE
and
25TH ANNUAL CARDIOLOGISTS CONFERENCE
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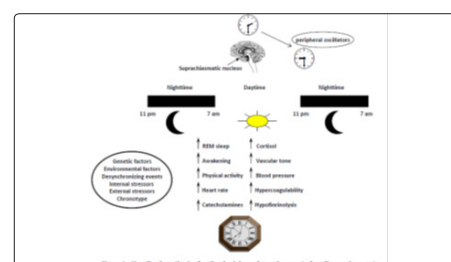


Roberto Manfredini

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Women and circadian onset of cardiovascular diseases: ‘Time is a gentleman’.

Statement of the Problem: Chronobiology is the biomedical science aimed to study biological rhythms, and circadian (approximately 24 hours) rhythms are the most widely studied. It is known that the occurrence of cardiovascular events is not evenly distributed in time, but shows specific temporal patterns varying with the time of the day. It is also known that women are often excluded or underrepresented in clinical trials, and many studies do not report the number of men/women participants or provide analysis by gender. Methodology: We have recently conducted a systematic study, performing a PubMed aimed to investigate papers (years 1996 to 2015), dealing with the circadian periodicity of acute myocardial infarction, sudden cardiac death and cardiac arrest, rupture or dissection of aortic aneurysms, and cerebrovascular events (e.g., stroke, ischemic and hemorrhagic, intracerebral and subarachnoid hemorrhage). For each study, we collected data including authors, country and year of publication, clinical trial characteristics, number of patients, age, number of men/women, circadian peak time of occurrence, and analysis by gender (if available) with respective peak times. Overall, we analyzed 64 studies, with a total sample of more than 651107 cases. A separate analysis by gender was provided in a low percentage of studies (28 out of 64, 43.8%). Nevertheless, these 28 studies accounted for 85% of total cases, so that the conclusion that morning hours represent high risk for onset of acute cardiovascular diseases in both men and women seems to be based on robust evidence. Conclusion & Significance: Based on these data, and on previous dealing with seasonal (winter) and weekly (Monday) risk temporal area, it seems that ‘time is a gentleman’, since it makes not differences in striking men and women in a similar temporal frame, even if risk factors as well as presenting signs and symptoms may be different in women.



Recent Publications

1. Manfredini R et al (2004) Chronobiology of rupture and dissection of aortic aneurysms. J Vasc Surg 40:382-388.
2. Manfredini R et al (2004) Influence of circadian rhythm on mortality after myocardial infarction: data from a prospective cohort of emergency calls. Am J Emerg Med 22:555-559.
3. Manfredini R et al (2005) Circadian variation in stroke onset: identical temporal pattern in ischemic and hemorrhagic events. Chronobiol Int 22:417-453.
4. Manfredini R et al (2011) Seasonal and weekly patterns of occurrence of acute cardiovascular diseases: does a gender difference exist? J Womens Health (Larchmt) 20:1663-1668.
5. Manfredini R et al (2013) Twenty-four-hour patterns in occurrence and pathophysiology of acute cardiovascular events. Chronobiol Int 30:6-16.

Biography

Roberto Manfredini, MD, is full professor of Internal Medicine, Director of the Department of Medical Sciences at the University of Ferrara, Italy, and Head of the Clinica Medica Unit, General Hospital of Ferrara, Italy. He has expertise in clinical chronobiology, and he contributed in the identification of rhythmic occurrence of acute cardiovascular diseases along time, eg, hour of the day, day of the week, and month/season of the year. This innovative temporal approach to cardiovascular diseases, i.e., myocardial infarction, acute aortic diseases, pulmonary embolism, stroke, has opened up the potential for improving healthcare via a temporized drug administration (chronotherapy). He has built this innovative knowledge after years of experience in research and teaching both in hospital and education institutions.

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