Young Survivors of Myocardial Infarction

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In a study of psychological differences between young male and female survivors of myocardial infarction (MI), Uuskula [1] confirms the importance of subclinical affective symptomatology in the prodromal phase of myocardial infarction and in the definition of recovery. Females suffer considerably more frequently from fatigue and exhaustion in the prodromal period of MI. Women develop a higher level of cognitive-worry, sub-scale score of anxiety; they are more irritable and less able to relax. Neurobiologic features are suggested by reports linking rumination and subclinical impairment of lung airways in panic disorder with dopamine abnormalities lateralized to the right hemisphere, in which the metabolic rate is higher for women. This hypothesis is supported by optimal response organization at intermediate dopamine tone in a medial-frontal-striatal activation system, the concept of cellular tone, and deactivation of the right hemisphere, a state marker of depression, promoting left-hemisphere dominance associated with cardiac arrhythmia and vasoconstriction [2-4].

These observations prompt finding the optimum treatment and psychosocial rehabilitation course for young occupationally active patients with first acute MI [1, 5] and mental stress-induced left ventricular dysfunction predictive of adverse cardiac events [1, 6], by monitoring behavioral correlates of asymmetrical brain functions, reflecting properties of neuronal activity and firing. This method is supported by the correlation of rate and variability in duration of speech hesitation pauses with the left and right hemisphere, respectively [7], the role of the right prefrontal cortex in the discrimination of duration [8] and the association of the reduction of blood pressure with longer, less recurrent pauses predictive of response to neuropharmacologic intervention [7] alleviating depressive symptoms and that recovery from depression was associated with changes in coping style, such that patients relied less on inappropriate emotion-focused coping strategies [2]. It is also supported by profound effects on angina pectoris through consciously focusing attention on breathing and intervening pauses, and adaptation to stress manifested by slower, deeper breathing contributing to 6.5-fold reduction in mortality [6].

References

Uuskula M: Psychological differences between young male and female survivors of myocardial infarction. *Psychother Psychosom* 1996;65: 327-330.

Friedman EH: Neurobiology of psychosocial factors in peptic ulcer (letter). *J Clin Gastroenterol* 1996;22:165.

Friedman EH: Neurobiologic characteristics of umbilical artery lactate levels (letter). *Am J Obstet Gynecol* 1996;175:236-237.

Friedman EH: Cardiac rehabilitation factors (letter). J Gen Intern Med 1996;10:355.
Friedman EH: Shift work and risk of coronary heart disease in women (letter). Circulation 1996;94:2305.
Friedman EH: Mental stress-induced left ventricular dysfunction (letter). Am J Cardiol 1996;77:326.
Friedman EH: Circadian variation of left ventricular diastolic function in healthy people (letter). Heart 1996;76:90.
Casini L, Macar F: Can the level of prefrontal activity provide an index of performance in humans? Neurosci Lett 1996;219:71-74.

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