LETTERS TO THE EDITOR

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Psychology, cardiology, and gender

A meta-analysis of data on a 2 year psychological treatment in patients following a cardiac event performed by Linden et al. found no benefit on morbidity and mortality in women. Speculation included higher prevalence of obesity, physical inactivity and major depression, lower levels of social support and higher marital stress in women, and different coping mechanisms. In an accompanying correspondence, Linden et al. additionally hypothesized that male coronary patients may experience greater benefit from the psychological treatment because of the objectively worse prognosis of other subgroups, including heart failure patients.

Beyond the aforementioned factors, a body of evidence suggests that some constitutional gender differences may expose women to the adverse effects of psychological factors. The differences mainly relate to situational cardiovascular reactivity and triggering mechanisms of an acute event and could help explain the particular lack of effect on mortality in the present meta-analysis.

Late middle-aged and elderly women are more likely to have a more pronounced acute haemodynamic response to a mental stress expressed by greater rise in heart rate, blood pressure, cardiac output, and systemic vascular resistance. The greatest response, independent of hypertension or antihypertensive therapy, was observed in socially phobic women, compared with non-phobic women as well as with their male counterparts. Interestingly, in socially phobic men, the response seems not to differ from non-anxious men. Then, clinical data suggest that women may be more subject to emotional triggering of acute events such as apical ballooning syndrome and perhaps acute coronary syndrome. A possibility that gender differences reach the basic mechanisms of atherogenesis is rather speculative. There is an observation that depression was a predictor of ischaemic cardiac heart disease in women but not men with insulin-dependent diabetes. Moreover, a finding that the subordinate females of cynomolgus monkey species develop more progressed atheroatherosclerosis than non-stressed females implies that important differences could be found both between and within gender.

Additional work is needed to determine whether women are biologically more prone to the adverse cardiovascular effects of psychological factors. Further possibility is that such effects are more difficult to treat and influence in women. Regarding that both psychotherapeutic and psychopharmacological treatments should be investigated. For example, we observed a protective effect of anxiolytics against emotional and other external triggering of ventricular tachycardia confined to men, with no significant effect seen in women.

Linden et al. are to be commended for their well-done research. In the future, several substantial issues must be thoroughly explored. A secondary analysis of the MIND-IT clinical trial showed the much greater 18 month incidence of cardiac events among depression treatment non-responders than responders (23.6 vs. 7.4%). Also recently, the short allele of the serotonin transporter polymorphism has been associated with both depression symptoms following a myocardial infarction and subsequent cardiac events. Identification of subpopulations at higher risk according to cardiovascular disease, gender, cardiovascular reactivity, treatment responsiveness, psychological and genetic profile may get us closer to more targeted psychological interventions and improved survival of cardiac patients.

References


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Operator vs. patient radiation exposure in transradial and transfemoral coronary interventions

We were interested by the recent report from Brasselet et al. measuring radiation exposure to patients and operators after transradial and transfemoral coronary diagnostic and interventions. In brief, they showed that using standard leaded glass and flaps, transradial procedures were associated with higher patient and operator radiation exposures. In the light of these findings, they concluded that “radial route indication should be promptly reconsidered.” Before