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Symptoms of depression and exhaustion and their relation to myocardial infarction and periodontitis

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On behalf: PAROKRANK steering committee

Topic(s):
Psycho-social

Citation:
European Journal of Cardiovascular Nursing (2016) 15 (Supplement), S96

Background: Psychosocial stress, depression and exhaustion are considered risk factors not only for cardiovascular disease (CVD) but also for periodontitis. The PAROKRANK (Periodontitis and its relation to coronary artery disease) study population consisted of patients, <75 years, with a first myocardial infarction (MI) and matched controls.

Aim: This report aims to study how symptoms of depression and exhaustion, and psychosocial stressors relate to MI and periodontal disease.

Methods: The study population comprised 805 patients with a first MI and 805 age, gender and geographically matched controls without MI. The mean age of participants was 62±8 years and 81% were males. All participants were interviewed on their medical history, including medical treatment, and underwent a standardized physical examination and a dental panoramic x-ray grading their periodontal status. Information on a large number of risk factors related to cardiovascular disease and periodontitis was obtained. In addition detailed information on perceived stress at home and at work, control of life and symptoms of depression (Montgomery Åsberg Depression Scale; MADRS) and exhaustion (Karolinska Exhaustion Disorder Scale; KEDS) were collected. A MADRS score ≥13 and a KEDS score ≥19 points were considered as an indication of clinically relevant symptoms of depression and exhaustion.

Results: Patients had a more frequent family history of CVD, smoking and divorce than controls while the educational level was lower in the latter group. Symptoms of depression were more common among patients than controls (14 vs. 7%; p<0.001) and they received less treatment with antidepressants (patients: 16 vs. controls: 42%; p<0.001). Symptoms of depression or exhaustion doubled the risk for MI (MADRS OR 2.17 [99% CI 1.23-3.82]; KEDS OR 2.22 [99% CI 1.32-3.73]). More patients than controls had experienced stress at home (18 vs. 11%; p<0.001) and at work (42 vs. 32%; p<0.001) and even moderate levels of stress at home increased the risk of MI (OR 2.15 [99% CI 1.35-3.41]). There was no difference in symptoms of depression and exhaustion between those with periodontitis compared to those without.

Conclusion: Patients with a first MI more frequently report symptoms of depressions and exhaustion than matched controls without MI, but receive less antidepressive treatment suggesting an under-treatment of depression in patients who will experience a myocardial infarction. The relation between depression and exhaustion and periodontitis was not confirmed by the present investigation.