

Stress related disorders and risk of cardiovascular disease



Most people these days face some form of stress. It might be due to work pressure, loss of a loved one, a life-threatening illness, violence, a natural disaster, etc. More and more evidence now suggests that such adversities can lead to an increased risk of cardiovascular morbidity, injury, infection, and certain autoimmune diseases. The largest elevation of this risk has been observed in people who develop psychiatric disorders because of their trauma.

Stress disorders are primarily categorised as acute stress reaction, post-traumatic stress disorder (PTSD), and adjustment disorder. PTSD is the most severe of these disorders and is characterised by avoidance, negative cognitions, mood changes, re-experiencing, and hyperarousal.

A population-based, sibling-controlled cohort study was conducted to investigate whether there is an association between stress-related disorders and risk of cardiovascular disease. The study included 136,637 patients with stress-related disorders including PTSD, acute stress reaction, adjustment disorder, and other stress reactions. Primary outcome measures included the diagnosis of incident cardiovascular disease or its specific subtypes. The patients were followed up for 27 years.

Results of the study showed that the crude incidence rate of any cardiovascular disease was 10.5, 8.4 and 6.9 per 1000 person-years among exposed patients, their unaffected full siblings, and the matched unexposed individuals respectively. The hazard ratio for any cardiovascular disease was 1.64% in sibling based comparisons. The highest subtype specific hazard ratio was observed for heart failure. Stress-related disorders were strongly associated with early-onset cardiovascular disease. Patients with stress-related disorders had a higher burden of somatic diseases and a lower family income level. They were also more likely to be divorced or widowed. These findings show a peak of cardiovascular diseases risk immediately after diagnosis of a stress-related disorder, followed by a rapid decline within the first six months.

These findings clearly show that stress-related disorders are associated with multiple types of cardiovascular disease independent of familial background, history of psychiatric disease and psychiatric comorbidity. The risk of severe and acute cardiovascular events was found to be highest during the period adjacent to the diagnosis of a stress-related disorder. The relative risk of other cardiovascular diseases was more pronounced during the first year after diagnosis of a stress-related disorder. While the highest point estimates were observed for PTSD, other stress-related disorders also demonstrated a considerably increased risk of cardiovascular disease.

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Published on : Wed, 17 Apr 2019