

Cancer-related cardiac toxicities: Psychological correlates

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Background: With the evolution of systemic and targeted therapies in cancer treatment, it has become increasingly evident that damage to the heart may occur as a result of cancer treatment. In the general population, increasing evidence suggests that psychological factors are also implicated in increased risk of developing cardiac problems. For instance, anxiety, depression and psychological stress have all been found to increase the risk for the onset of cardiovascular disease as well as being associated with complications in patients who already have heart disease. To our knowledge, no study has been conducted in the oncology setting to examine the association between psychological factors and cardiotoxicity related to cancer therapies.

Methods: This was a single center case cohort study conducted at the Ottawa Hospital Cancer Centre. Between October 1, 2008 and June 25, 2014, cancer patients completed the Edmonton Symptom Assessment Scale (ESAS) at each cancer clinic visit prior to seeing their oncologist. Depression and anxiety scores for the period preceding the referral to the Ottawa Cardiac Oncology Clinic (n=62; cardiac group) were compared with those for a cohort of cancer patients (n= 62; control group) not referred to the cardio-oncology clinic.

Results: Depression and anxiety scores were significantly higher among the cardiac group than the control group. Additionally, it was found that experiencing high levels (defined as scoring above the median for the entire sample) of both depression and anxiety was more common among the cardiac group than the control group.

Conclusions: These preliminary findings suggest that depression and anxiety are potential risk factors for developing cardiotoxicity due to cancer treatment. However, future larger studies are

needed to replicate these findings and to specify the mechanisms by which depression and anxiety negatively impact the cardiovascular system of cancer patients who develop cardiotoxicities.

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