Clinical reviews

Our panel of GPs review recent research papers in their specialist areas that may influence the way you practise

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Cardiovascular disease

Childhood cancer survivors at increased risk of cardiac ischaemia

Children who have survived cancer, particularly those treated with chemotherapy and/or radiotherapy, have a higher risk of adverse cardiac events later on, a pan-European study has found.

The investigators assessed the cumulative incidence of symptomatic cardiac ischaemia in childhood cancer survivors, who had survived at least five years, participating in the PanCareSurFup study.

Patients diagnosed with cancer in childhood, between 1940 and 2009, from seven European countries including the UK were included in the cardiac outcomes analysis.

Symptomatic cardiac ischaemia was graded as follows: grade 3 (symptomatic and testing consistent with ischaemia or unstable angina or intervention needed), grade 4 (myocardial infarction; life-threatening cardiac ischaemia) or grade 5 (death due to cardiac ischaemia).

Cumulative incidences were calculated, both overall and for different subgroups, based on types of treatment and malignancy.

Data were available for analysis on 36,205 childhood cancer survivors. Overall, 302 of the 36,205 patients developed symptomatic cardiac ischaemia during follow-up. The median follow-up period following the primary cancer diagnosis was 23 years (range 5.0-72.5 years) and median age at follow-up was 29.7 years (range 5.1-79.8 years).

The median age at diagnosis of symptomatic cardiac ischaemia was 43.6 years (range 14.6-73.3 years) and a substantial minority of patients, 41/302 (14%), were diagnosed before the age of 30 years.

Those patients treated with radiotherapy and/or chemotherapy were affected earlier than those not treated with these treatment modalities; 15% of first symptomatic cardiac ischaemic events occurred before the age of 30 in the former compared with 3% in the latter.

Furthermore, treatment with radiotherapy and/or chemotherapy doubled the risk of symptomatic cardiac ischaemia compared with not receiving these treatments; HR 2.1 (95% CI: 1.5-3.0).

The cumulative incidence by age 60 was 5.4% (95% CI: 4.6-6.2%). The rates in men were significantly higher than those in women at 7.1% (95% CI: 5.8-8.4%) and 3.4% (95% CI: 2.4-4.4%) respectively, $P < 0.0001$.

The cumulative incidence by age 60 was 6.2% (95% CI: 4.1-7.3%) in those who had received chemotherapy and/or radiotherapy compared with 3.6% (95% CI: 2.1-5.1%) in those who had not.

The cumulative incidence of symptomatic cardiac ischaemia by age 60 in childhood lymphoma survivors was 10.8% (95% CI: 8.2-13.3%) significantly higher than in survivors of other malignancies.

This large cohort study found that 1 in 18 childhood cancer survivors will develop severe, life-threatening or fatal cardiac ischaemia by the age of 60.

The study's findings should prompt GPs to consider symptoms which may suggest cardiac ischaemia, in patients who have survived childhood cancer, which might otherwise be further down the differential diagnosis in a young patient.

The study authors state: 'All medical professionals and survivors should be aware that symptomatic cardiac ischaemia occurs in this population, even at a young age. When symptoms, such as chest pain, occur, there should be a low threshold for performing diagnostic tests and starting treatment.'

DR PETER SAVILL

Feijen EAM, van Dalen EC, van der Pal HJH et al on behalf of the PanCareSurFup consortium. Increased risk of cardiac ischaemia in a pan-European cohort of 36 205 childhood cancer survivors: a PanCareSurFup study. *Heart* 2021;107:33-40 »