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Testicular Cancer Treatments May Incur Risks

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CHICAGO—Testicular cancer survivors treated with chemotherapy and radiotherapy are at increased risk for cardiovascular disease (CVD), researchers reported at the American Society of Clinical Oncology annual meeting. These patients also are at higher risk for hypertension and diabetes.

Investigators studied 990 men treated for unilateral testicular cancer from 1980 to 1994. In 2007 and 2008, the researchers conducted a follow-up analysis of these patients that included physical examinations, blood samples, and a questionnaire. The researchers divided subjects into four treatment groups: surgery only (206 patients); radiotherapy only (386 patients); cisplatin-based chemotherapy only (364 patients), and combined radiotherapy/chemotherapy (34 patients). Age-matched male controls from the general population were also recruited for the study. Men diagnosed with CVD before or within two years after their testicular cancer diagnosis were excluded from the analyses of CVD endpoints. The CVD endpoints included coronary artery disease (CAD) and total CVD. The median observation time was 19 years (range 13-28 years).

In all, 92 subjects (9.9%) experienced CVD events during follow-up. Compared with the surgery group, the chemotherapy and radiotherapy/chemotherapy groups had a 2.6 and 5.3 times increased risk for coronary heart disease, respectively. In addition, chemotherapy, radiotherapy, and radiotherapy/chemotherapy were associated with a 2.4, 2.3, and 5.2 times increased risk for any CVD event, respectively.

Compared with controls, testicular cancer survivors overall had a 70% increased risk for stroke and myocardial infarction. The risk was 2.0 and 4.5 times higher for patients treated with radiotherapy and radiotherapy/chemotherapy, respectively.

In addition, all treatments except surgery were associated with an increased prevalence of antihypertensive medication use compared with controls (22% vs. 13% for controls). Antihypertensive medication use was 3.3 and 4.1 times more likely in the chemotherapy and radiotherapy/chemotherapy groups. The radiotherapy and radiotherapy/chemotherapy groups had higher levels of C-reactive protein (a marker of inflammation) and a 2.3 and 3.9 times increased risk for diabetes.

Although men treated with chemotherapy and radiotherapy are at increased risk for CVD, the absolute risk is only about 9%, said investigator Hege Haugnes, PhD, a research scientist at the Institute of Clinical Medicine at the University of Tromsø, Tromsø, Norway. Still, testicular cancer survivors who undergo these treatments should have a CVD risk assessment performed every two years, she said. Patients who have surgery alone do not have the same increased risk so they may not need to be followed as closely, she said.

