Control Number: 15

Abstract Category: Clinical Case Challenge in Cardio-Oncology

Title: Large Echogenic Right Atrium Masses in a Patient with Breast Invasive Ductal Carcinoma and Positive Lymph Nodes undergoing Adjuvant Chemotherapy

ABSTRACT BODY

Background and Purpose

There are over 10 million American cancer survivors. Cardiovascular toxicity of chemotherapeutic agents includes dysrhythmias, cardiac ischemia, cardiomyopathic congestive heart failure (CHF), pericardial, and peripheral vascular disease. They are difficult to distinguish from disease not associated with cancer treatment, so determining a clear etiologic implication of chemotherapy is difficult. These patients are also at risk of having cardiac metastasis.

Case Description and Outcomes

70-year-old woman post-lumpectomy for a screening-detected grade 2 invasive ductal carcinoma of her right breast, resection margins clear, positive lymph nodes and lymphovascular invasion, T2 (2.6cm) N1 (⅗) cM0, ER/PR positive, HER-2/neu negative, Ki-67 positive (25%). Adjuvant chemotherapy was indicated given the high risk of recurrence. Baseline echocardiogram showed normal left ventricular size and systolic function with abnormal relaxation filling pattern and an echogenic area in the right atrium (RA). However, a transesophageal echocardiogram showed two echogenic masses in the RA, attached to the interatrial septum close to the superior vena cava (SVC), measuring up to 7x4.5 cm. Staging CT scan excluded other areas of suspected distant metastasis.

Discussion

This asymptomatic hypertensive ex-smoker patient with obesity (Body Mass Index of 40kg/m2) was started on AC-Taxol regimen, which includes Doxorubicin (an anthracycline) and Cyclophosphamide, followed by Paclitaxel. The risk for cardiotoxicity increases in women, on higher doses, preexisting cardiac disease, age >60 years, multiple cardiovascular risk factors (smoking, hypertension, obesity). Although cardiomyopathy has frequently been considered to occur late after exposure to anthracyclines, a recent study showed that systolic dysfunction is usually evident within one year among adult patients who develop cardiomyopathy. With her risk factors and RA masses, this patient is prone to cardiovascular complications and SVC syndrome. These two separate lesions are likely malignant if they shrink post-chemotherapy. Ensuring they are isolated to her heart and completed the regimen, they can be resected.

References

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2. J. Larry Jameson, et al. New York, NY: McGraw-Hill, http://accessmedicine.mhmedical.com.proxy.lib.nosm.ca/content.aspx?bookid=2129&sectionid=192016921.