Abstract: Establishing a practice gap to inform the implementation of more effective cardio-oncology clinical services: a retrospective audit examining the clinical management of patients with cardiotoxicity.

Authors:
RA Clark, Flinders University and the South Australian Health and Medical Research Institute - Adelaide - Australia,

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Background/Aim: Cardiotoxicity is an important and disabling consequence of cancer treatment for many cancer survivors. While multiple guidelines now exist, little is known about how well they are operationalised. The aim of this project was to describe the journey through the healthcare system of a group of patients with confirmed cardiotoxicity as a consequence of cancer treatment and to establish baseline data for the implementation evidence based practice.

Methods: Process-mapping methods were used to map patient assessment and management. Forty-six (n=46) cases were randomly selected from the echocardiogram databases of 3 large hospitals between 1979 and 2015. Consequently the 2012 European Society for Medical Oncology (ESMO) Clinical Practice Guidelines were the most appropriate to use as the audit framework. In-depth interviews augmented audit findings.

Results: Mean age at cancer diagnosis was 53.3 years (range 6-89); 50% female; most frequent diagnosis breast cancer (30.4%) and non-Hodgkin’s lymphoma (23.9%); mean chemotherapy cycles 5.2 (Range 1-18). Cardiotoxicity diagnosed as reduced left ventricular ejection fraction in 89.1% with 10.9% cardiac ischemia or arrhythmia. Prior to chemotherapy, 41 (89.1%) patients had pre-existing cardiovascular disease. Thirty nine (84.8%) participants had at least one modifiable risk factor and 12 (26.1%) were referred to cardiologist after diagnosis (only 5 (10.9%) were referred before chemotherapy). After treatment 22 (47.8%) patients were referred to a multidisciplinary heart failure clinics, 8 (17.4%) to cardiac rehabilitation, one to a cancer survivorship program and 10(27%) to a palliative care service. There were 16 (34.8%) deaths within the study group; 4 (8.7%) cardiac related, 5 (10.9%) cancer related and the remaining 7 (15.2%) were reported as "other" including pneumonia and sepsis.

Of the 11 patients interviewed, 8 (72.7%) had been treated for breast cancer. No participant could clearly articulate their heart healthcare needs. They could not recall whether cancer professionals discussed the potential for cardiotoxicity with them prior to treatment, nor risk modification strategies. Cancer - Heart Failure fatigue and mild cognitive impairment were the most common impediments to undertake recommended lifestyle changes.

Conclusion: This audit demonstrates that the care of patients with cardiotoxicity after cancer treatment was variable and fragmented. There is an urgent need in our services for the development of evidence based models of care and clinical pathways to address this important problem.