

7th World Hematologists Congress

May 08-09, 2017 Barcelona, Spain

Incidence, natural history and outcome of targeted therapy-induced cardiotoxicity in hematologic malignancy (HM) patients

Chintan Shah, Yan Gong, Anita Szady, Qian Sun, Carl J Pepine, Taimour Langaee, Alexandra R Lucas and Jan S Moreb
University of Florida, USA

Introduction & Aim: Unanticipated cardiotoxicity is now identified as a significant clinical problem associated with new anti-cancer targeted agents. Risk factors and natural history are still poorly understood and are the main aim of this study.

Methods: We used 114 diagnosis codes for HM and 17 for cardiac diseases in order to identify patients in our electronic medical records (EPIC) over 10-year period. Cardiotoxicity was defined by left ventricular ejection fraction (LVEF) of <50%, arrhythmias, or ischemic cardiovascular event that occurred after initiation of the drug of interest. The targeted agents of interest include tyrosine kinase inhibitors (TKIs), proteasome inhibitors, monoclonal antibodies, hypomethylating agents, and immunomodulatory agents. Multivariable logistic regression, Kaplan-Meier analysis and log-rank test were used for statistical calculations.

Results: Of 820 patients with both HM and cardiac diagnosis, 29 patients (3.5%) developed cardiotoxicity after initiation of targeted therapies. We selected 70 matched controls based on type of targeted therapy. In the study group, the median time from exposure to cardiac event was 120 days (interquartile range, 30-180). Multiple variables, including conventional risk factors for heart disease, were not different between the two groups except prior history of DVT/PE ($P=0.011$), and Karnofsky score of $\geq 80\%$ ($P=0.005$). With median follow-up of 27 months, two patients in the study group died of cardiac causes. Repeat echocardiograms showed stable/improved LVEF in 23 patients. There was a trend towards worse OS in the study group ($P=0.071$).

Conclusions: About 3.5% of patients with HM experienced unanticipated cardiotoxicity due to targeted anti-cancer agents with related mortality of 6.8%. Most patients do well with stable compensated cardiac function. Risk of cardiotoxicity was significantly higher in patients with known history of DVT/PE. Future studies of possible underlying genetic predisposition will be of great importance.

Biography

Chintan Shah, is working as a Clinical Assistant Professor at the University of Florida, Florida, USA. After being born and raised in India, he moved to the United States in 2011. He completed his graduate training in the field of internal medicine from the Western Michigan University School of Medicine and is currently working as an internist. He has done quite a few presentations at the national and international conferences and has published in peer-reviewed journals. His goal is to achieve clinical excellence, provide compassionate care to patients and pursue a career in the field of Hematology and Oncology.

chintan.shah@medicine.ufl.edu

Notes: