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The role of ACEI and Beta-blockers in the primary prevention of acute, early, and late-onset anthracycline-induced cardiotoxicity.

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Aims: Anthracycline-induced cardiotoxicity has been classified based on its onset into acute, early, and late. It may have a significant burden on the quality and quantity of life of those exposed to this class of medication. Currently, there are several ongoing debates on the role of different measures in the primary prevention of cardiotoxicity in cancer survivors. Our review article aims to focus on the role of ACEI and beta-blockers in the primary prevention of anthracycline-induced cardiotoxicity, whether it is acute, early, or late-onset.

Methods: PubMed, Cochrane library search, and Google scholar database were searched for the relevant articles; we reviewed and appraised 9 RCTs.

Results: [N=1456; ACEI (n=399).B-blockers (n=511), placebo or no treatment (n=546)]. Cardiotoxicity was higher on the placebo group [n=156(28.6%)], compared with B-blockers [n=79(15.4%)], and ACEIs [n=79(19.8%)]. Total cardiotoxicity sample was 314 (21.6%). Echocardiogram used to assess LVEF using Simpson's biplane method. Follow up range in all RCTs was one week to 3 years; (mode six months).

Conclusion: Beta-blockers, especially carvedilol and ACEI, especially enalapril, should be considered for the primary prevention of acute and early onset cardiotoxicity. We recommend further studies to explore and establish the role of these neurohormonal blockers' role in the primary prevention of late-onset cardiotoxicity.

Key words: Anthracycline-induced cardiotoxicity, primary prevention, ACEI, Beat-blockers, neurohormonal blockers.

Biography

Dr Ayuna is a cardiology registrar in Salford Royal NHS foundation trust, UK, he is intereseted in intervential cardiology, he completed PGDip, MSc and MD in cardiology. Dr Sultan consultant intervential cardiologist at Wrightington Wigan and Leigh NHS Foundation Trust ,UK.

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