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CARDIOPROTECTIVE EFFECT OF DEXRAZOXANE (ICRF-187) AGAINST LATE ANTHRACYCLINE TOXICITY IN PEDIATRIC PATIENTS

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Purpose: The authors conducted a retrospective study to determine whether dexrazoxane (ICRF-187) would reduce late anthracycline-induced cardiotoxicity in patients treated in childhood for hematological malignancy.
Patients and methods: The authors examined 155 patients (90 male/65 female) aged 15+4,9 years (5-29, median 15 years) in long-term remission of the malignancy. The cardioprotection was given to 95 patients (54 male/41 female) and standard treatment was used in 60 patients (36 male/24 female). Dexrazoxane (CardioxanR, Chiron comp.) was given in the ratio 20:1 to anthracycline. The time of follow-up was 1-29 years (mean 6 years). The control group consisted of 41 volunteers (22 males/19 females) aged 16+6,7 years (4-31, median 18 years). The cardiotoxicity was defined as the presence of heart failure or the decline of shortening fraction below 30% or ejection fraction below 55%.
Results: The anthracycline cardiomyopathy with the presence of heart failure was diagnosed only in one patient treated with standard regimen. The pathological decline of fractional shortening was present only in 3% of patients from cardioprotective group and in 15% of patients without cardioprotection. Similarly, none of patients with cardioprotection revealed pathological value of ejection fraction, while 10% of patients with standard protocol showed depressed ejection fraction. Finally, the percentage of pathological findings other echocardiographic variables was significantly higher in sub-group without cardioprotection.
Conclusions: Dexrazoxane reduces the risk of developing of late clinical and subclinical cardiotoxicity and does not affect response rates to chemotherapy and overall survival in the mean time six years of follow-up.