



CLINICAL STATUS AND CENTRAL HEMODYNAMICS IN PATIENTS WITH LYMPHOPROLIFERATIVE DISEASES TREATED WITH DOXORUBICIN

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Doxorubicin (DOX) is widely prescribed chemotherapeutic agents in human cancers treatment of different localization. However, the clinical use of DOX may be a cause of severe cardiac and renal dysfunction.

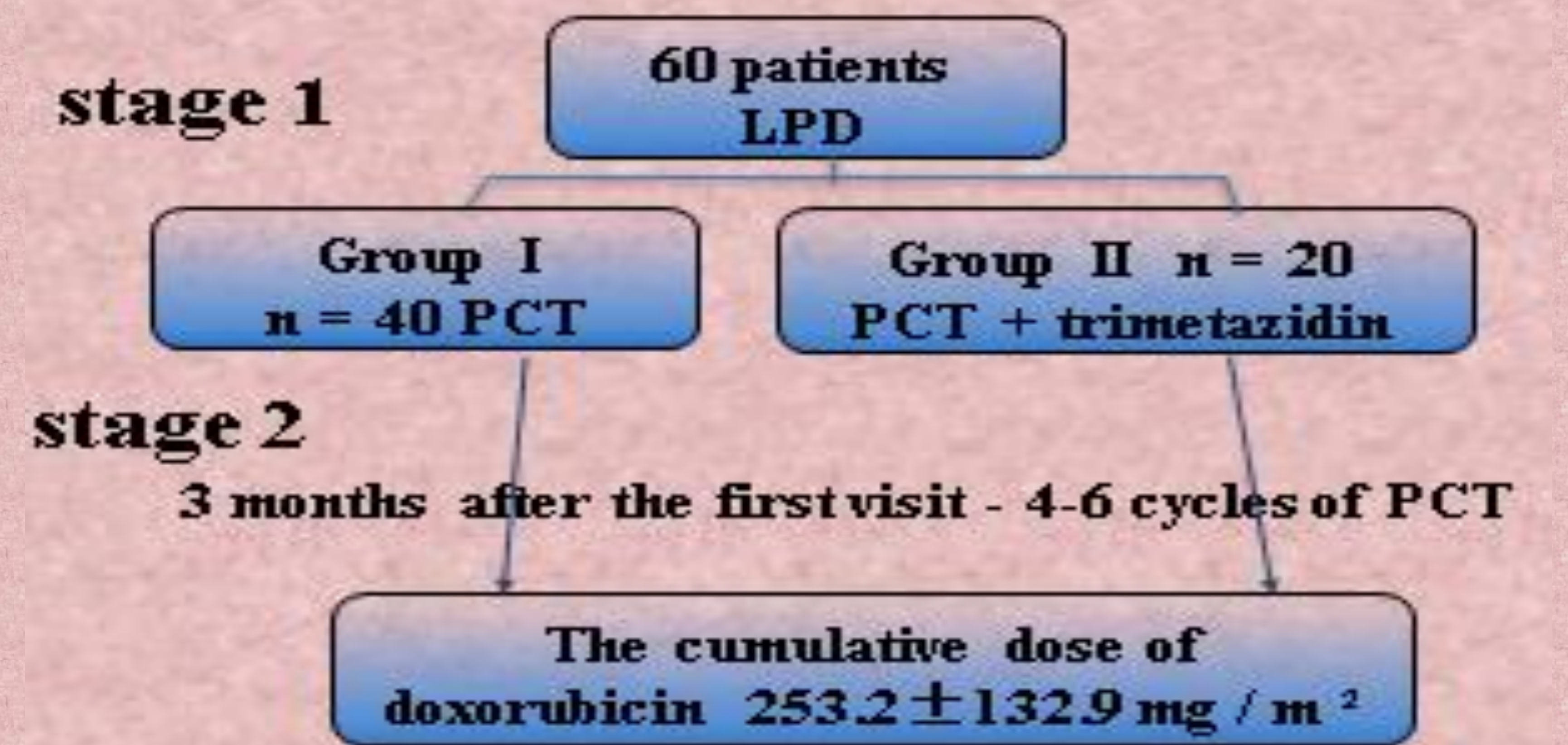
Purpose: In this study we aimed to revealed the adverse effects of DOX on clinical status cardiac and renal hemodynamics in patients with lymphoproliferative diseases (LPD) and to estimate the effectiveness of trimetazidine in preventing DOX-induced cardiac toxicity.

Methods: echocardiography, oscillographic analysis of the cardiovascular hemodynamic, kidney arteries scanning were performed before and after three months of DOX-polychemotherapy (PCT). The clinical status of patients was estimated by the clinical status scale (Mareev V., 2000) (CSS), where 0 points – good life quality, 20 points – the worst.

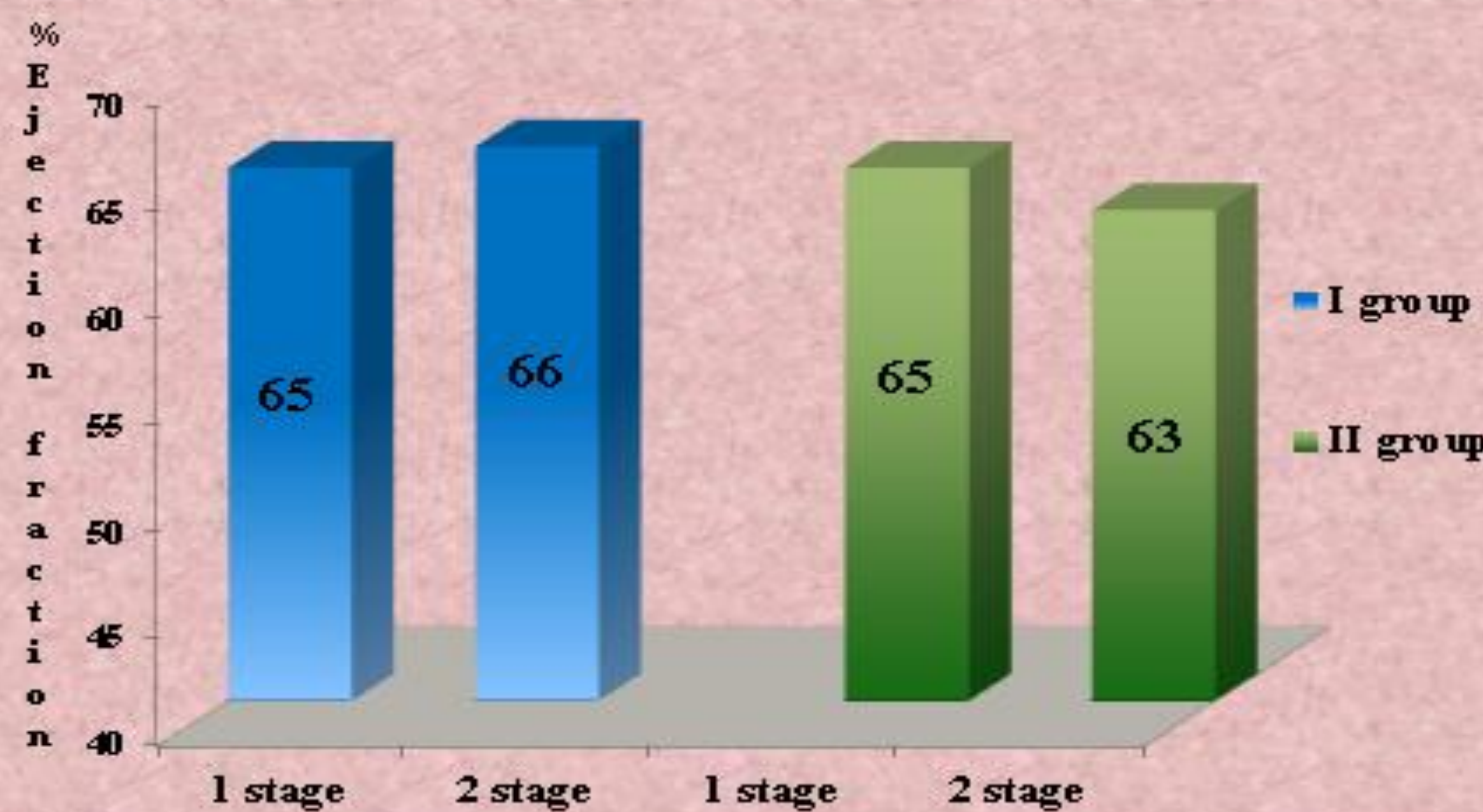
Results: Before PCT there were no significant difference between two groups in cardiovascular and renal parameters ($p > 0.05$). Left ventricular (LV) systolic function remained unchanged after 3 month of DOX-PCT in both groups. Analysis of the LV diastolic function showed significant increase of deceleration time (DT) in group I, while in group II there were tendency to DT decrease. Parameters of renal hemodynamics didn't change. A tendency of peripheral vascular resistance reduction was observed in group II.



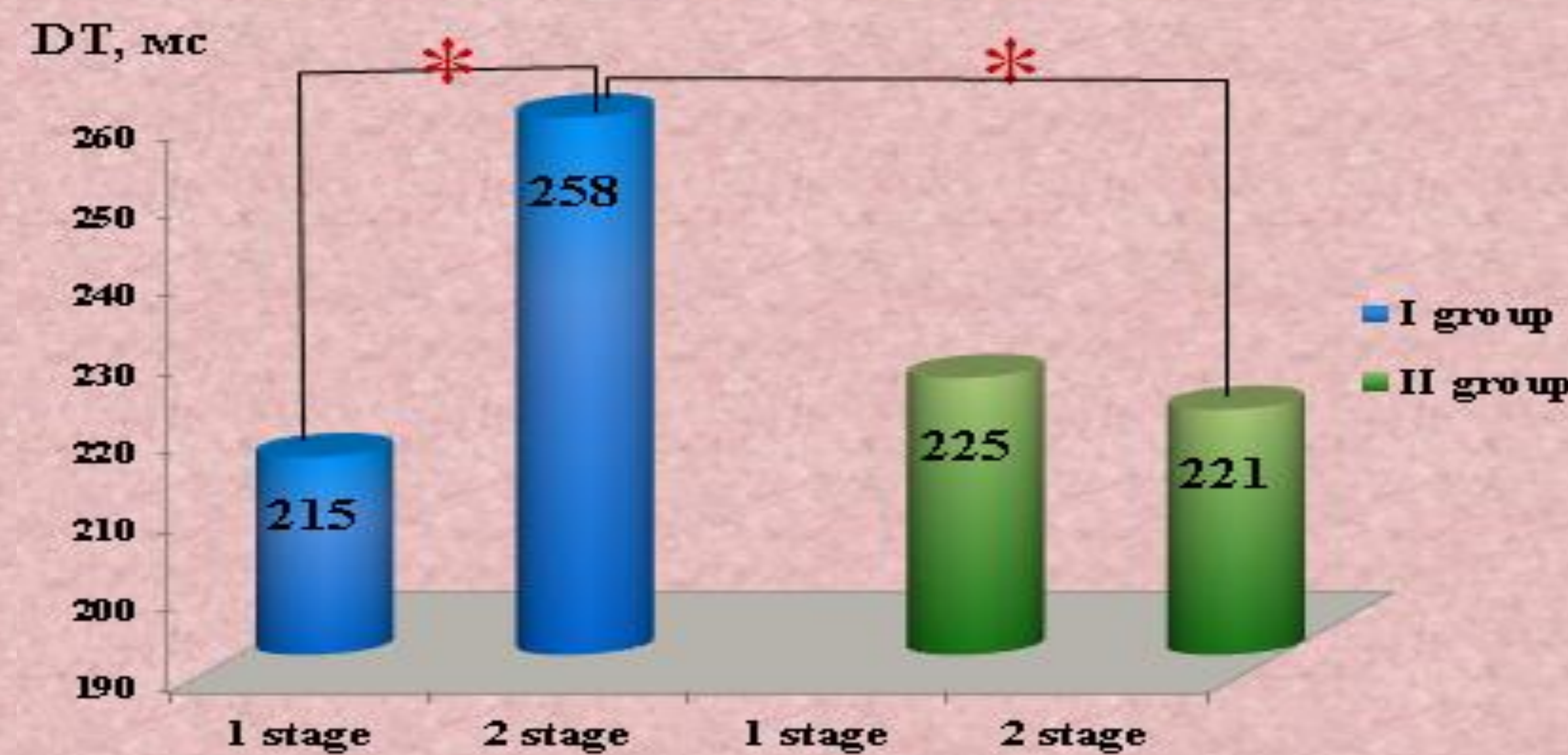
RESEARCH DESIGN : PRIOR TO THE POLYCHEMOTHERAPY



Systolic left ventricular function



Diastolic left ventricular function

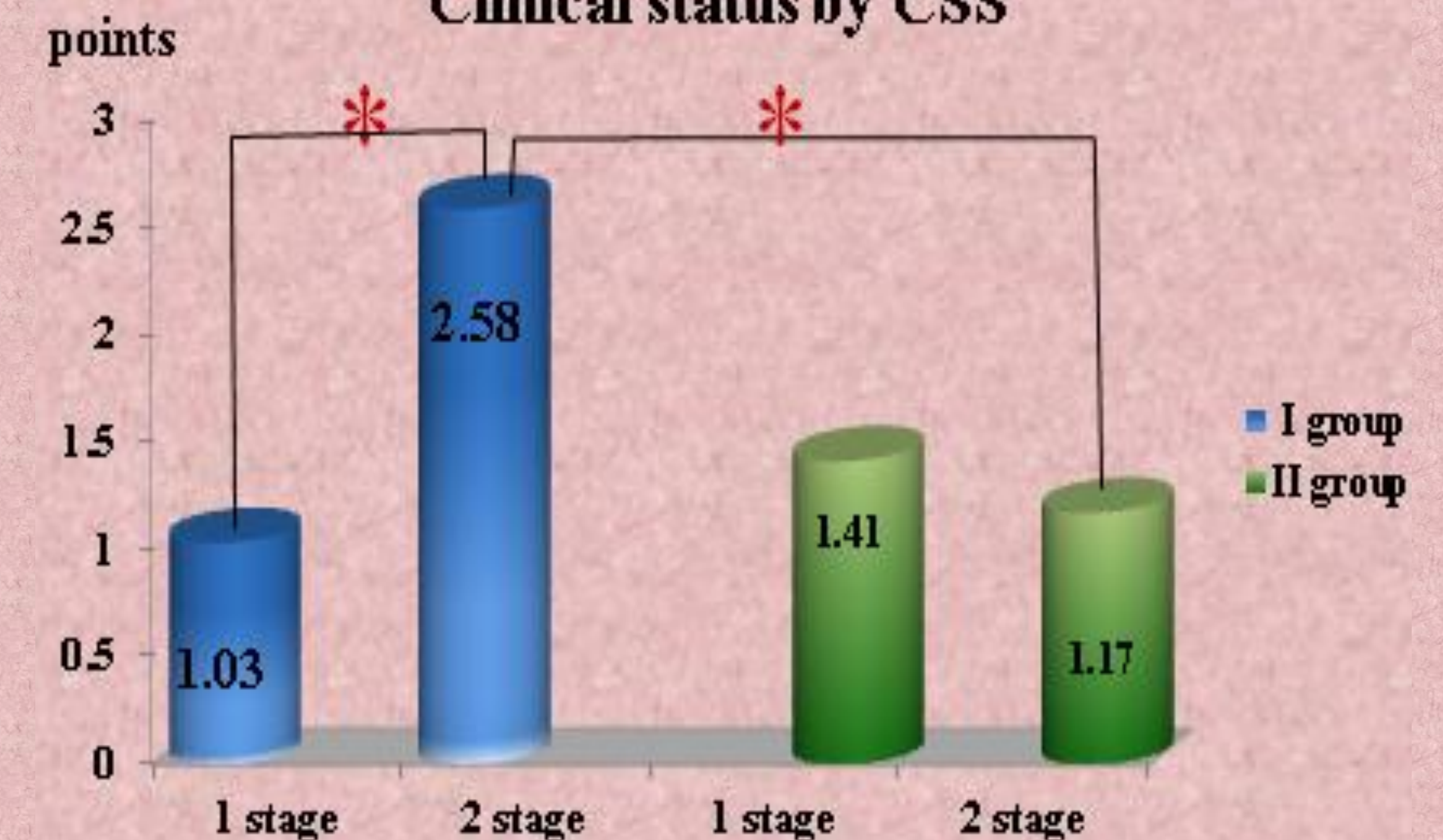


Risk factors of the deceleration diastolic function

Risk factors	DT, mc	
	r	p
Age	0,46	0,005*
Arterial hypertension	0,38	0,02*
Hemoglobin, g / l	-0,43	0,009*

CSS analysis showed increase the total points in patients of group I after 3 months of DOX-PCT treatment and no changes in group II.

Clinical status by CSS



Significant correlation were revealed between DT and age, DT and arterial hypertension, DT and hemoglobin level.

Conclusions: Cumulative dose of DOX-PCT 253.2 ± 132.9 mg/m² in patients with LPD followed by worsening of diastolic dysfunction, expressing in DT increase, accompanied by clinical status worsening. Age, arterial hypertension, and anemia are the risk factors of the progression of the diastolic dysfunction. Trimetazidine in a dose 70 mg/day could be an inexpensive therapeutic agent in preventing of DOX-induced cardiac toxicity.