Kliničke i laboratorijske razlike između bolesnika koji boluju od sistemske skleroze sa i bez dijastoličke disfunkcije lijeve klijetke

Clinical and laboratory differences between patients diagnosed with systemic sclerosis with and without diastolic dysfunction

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UVOD: Dijastolička disfunkcija lijevog ventrikula (LVDD) je česta u bolesnika sa sustavnom sklerozom (SSc). Kako je poznato da je LVDD povezana sa starenjem, mnogi drugi klinički čimbenici gube svoju značajnu povezanost s LVDD nakon usklađivanja s dobi bolesnika. Svrha ovog rada je bila utvrditi klinička i laboratorijska obilježja u SSc bolesnika s i bez LVDD, a koji su bili podudarni po dobi.

PACIJENTI I METODE: U ovu presječnu studiju bili su uključeni SSc bolesnici s očuvanom istisnom frakcijom lijeve klijetke, 13 bolesnika s LVDD te 13 bolesnika bez LVDD podudarnih po dobi, spolu, indeksu tjelesne mase i navici pušenja. Postojanje LVDD je bilo definirano i klasificirano prema smjernicama American Society of Echocardiography. Svi ispitanici su bili podvrgnuti kliničkom pregledu, serološkoj analizi i ehokardiografskoj procjeni srčane funkcije, uključujući metodu pulsno tkivnog Dopplera te procjeni kardiopulmonalne sposobnosti 6-minutnim testom hodanja (6MWT).

REZULTATI: Između SSc bolesnika s i bez LVDD nije postojala statistički značajna razlika s obzirom na sistolički i dijastolički tlak, srčanu frekvenciju, indeks mase lijeve klijetke, prevalenciju plućne hipertenzije i protutijela. Kod SSc bolesnika s LVDD bolest je bila dužeg tijeka u odnosu na bolesnike bez LVDD (16 vs 6,65 god; $p=0,004$) i većeg stupnja aktivnosti - EUSTAR score (5,77 vs 3,12; $p=0,001$). Serumski razina IL-6 (6,39 vs 2,94 pg/mL; $p=0,021$) i NT-proBNP (24,8 vs 10,1 pmol/L; $p=0,003$) je bila znatno veća u SSc bolesnika s LVDD. Hodna pruga 6MWT je bila kraća u SSc bolesnika s LVDD u usporedbi sa SSc bolesnicima bez LVDD (326,5 vs 398,7 m; $p=0,034$). Također je desaturacija hemoglobina tijekom 6MWT bila značajnija u SSc bolesnika s LVDD (-3,38 vs -1,92%; $p=0,022$).

ZAKLJUČAK: Bolesnici sa SSc i LVDD su imali bolest dužeg trajanja i većeg stupnja aktivnosti te značajno veću razinu serumskog IL-6 i NT-proBNP u odnosu na SSc bolesnike bez LVDD. Postojanje LVDD je značajno utjecalo i na kardiopulmonalnu sposobnost u bolesnika sa SSc.

BACKGROUND: Left ventricular diastolic dysfunction (LVDD) is the most common cardiac abnormality in systemic sclerosis (SSc). It is known that aging is a primary determinant of LVDD in SSc patients and many of the clinical factors associated with LVDD were no longer associated after adjusting for age. The aim of this study was to determine clinical and laboratory parameters of SSc patients with and without LVDD matched for age.

PATIENTS AND METHODS: We studied 13 SSc patients with preserved left ventricular ejection fraction (LVEF) and LVDD, and 13 SSc patients without LVDD matched for age, sex, body mass index and smoking status. LVDD was defined and classified according to the American Society of Echocardiography recommendations. Serum IL-6 and NT-proBNP levels were measured and subjects were evaluated by conventional and pulsed-wave tissue Doppler echocardiography and by the six minute walk test (6MWT).

RESULTS: There was no difference between SSc patients with and without LVDD according to heart rate, systolic and diastolic arterial pressure, left ventricular mass index, prevalence of pulmonary artery hypertension, and antibody status. SSc patients with LVDD had longer duration of SSc than SSc patients without LVDD (16 vs 6.65 yrs; $p=0.004$), and had higher EUSTAR score (5.77 vs 3.12; $p=0.001$). The serum level of IL-6 (6.39 vs 2.94 pg/mL; $p=0.021$) and NT-proBNP (24.8 vs 10.1 pmol/L; $p=0.003$) were significantly increased in SSc patients with LVDD. The 6MWT distance was shorter in SSc patients with LVDD as compared to those without LVDD (326.5 vs 398.7 m; $p=0.034$). Also, desaturation during the 6MWT was more significant in SSc patients with LVDD (-3.38 vs -1.92%; $p=0.022$).

CONCLUSIONS: SSc patients with LVDD had longer disease duration, higher disease activity, and significantly increased serum IL-6 and NT-proBNP levels in comparison with those without LVDD. Also, LVDD is associated with decreased exercise capacity in SSc patients.

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