

Povezanost antropometrijskih i kardiometaboličkih parametara u adipoznih bolesnika

Relationship between anthropometric and cardiometabolic parameters in adipose patients

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KLJUČNE RIJEČI: adipozitet, antropometrijski parametri, kardiometabolički parametri.

KEYWORDS: anthropometric parameters, obesity, cardiometabolic parameters.

CITATION: *Cardiol Croat.* 2018;13(11-12):386. | <https://doi.org/10.15836/ccar2018.386>

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Cilj istraživanja bio je odrediti povezanost između parametara pretilosti (opseg struka, bokova, omjer struk/bokovi) i BMI (*body mass index*) u 48 bolesnika, 15 muškaraca i 33 žene te laboratorijskih nalaza (lipidogram, glukoza u krvi (GUK), inzulin, HOMA (*homeostatic model assessment*) index) s ehokardiografskim nalazom (LViDd, LViDs, lijevi atrij (LA) area, LA volumen, E/E') čije vrijednosti najviše koreliraju s porastom tjelesne težine. U ispitivanju je korištena Bayesian Pearson korelacija za određivanje stupnja pozitivne korelacije (signifikantna vrijednost rho koeficijenta 0,5 i više). Učinjena je statistička analiza i korelacija svih parametara prema spolu, prema podgrupi bolesnika s dijabetesom i arterijskom hipertenzijom, odnosno grupi bez komorbiditeta. Prosječne vrijednosti: opsega struka 126,6 cm (92,9-180,0), opsega bokova 134,3 cm (108-174), omjer opsega struka i bokova 0,93 (0,74-1,16), BMI 43,17 kg/m² (28,91-63,67), inzulina 20,35 pmol/L (4,5-88,2), HOMA indexa 5,02 (0,9-21,95) za nedijabetičare, a od toga 15 bolesnika (35%) nije imalo inzulinsku rezistenciju. Većina je imala očuvanu ejekcijsku frakciju lijeve klijetke (prosječna LVEF 65%). Analizirali smo korelacije antropometrijskih i laboratorijskih nalaza s ehokardiografskim parametrima i prikazali signifikantno povezane korelacije. Pozitivna signifikantna korelacija nađena je: LViDd i BMI (r=0,52, BF10 je 121), LViDs i BMI (r=0,50, BF10=65), LViDd i opseg struka (r=0,56, BF10=150), LViDs i opseg struka (r=0,55, BF10=106), jači stupanj povezanosti je za muški u odnosu na ženski spol. Muški spol: LViDd i BMI (r=0,61, BF10=4,14), LViDs i BMI (r=0,57, BF10=2,73), LViDd i opseg struka (r=0,66, BF10=5,23), LViDs i opseg struka (r=0,64, BF10=4,28). Ženski spol: LViDd i BMI (r=0,37, BF10=1,61), LViDs i BMI (r=0,37, BF10=1,71), LViDd i opseg struka (r=0,28, BF10=0,59), LViDs i opseg struka (r=0,18, BF10=0,36). Nalazi za dijabetičare i hipertoničare: LViDd 5,55 cm (4,54-7,49), LViDs 3,47cm (2,88-5,96), LA area 18,30 (12,0-25,6) cm², LA volumen 47,83ml (25,0-76,0), E/E' 9,83 (6,0-13,0), skupina bez komorbiditeta: LViDd prosječni 4,9 (4,2-5,71), LViDs 3,03 (2,51-3,60), LA area 18,73cm² (11,3-34,5), LA volumen 48,82 (23,0-99,0), E/E' prosječno 9,41 (6,0-15,0). Adipozni muškarci s dijabetesom i hipertenzijom imaju značajnije ehokardiografske promjene u odnosu na adipozne bolesnike bez komorbiditeta.¹⁻³

The aim of the study was to determine the correlation between the parameters of obesity (waist circumference, hips, waist/hip ratio) and body mass index (BMI) in 48 patients, 15 male and 33 female, and laboratory findings (lipidogram, glucose, insulin, HOMA (homeostatic model assessment) index) with echocardiographic findings (LViDd, LViDs, left atrium (LA) area, LA volume, E/E') which values are most correlated with body weight gain. Bayesian Pearson correlation was used in the study to determine the degree of positive correlation (significant coefficient value 0.5 and above). Statistical analysis and correlation of all parameters according to sex, to the subgroup of patients with diabetes and hypertension, or group without comorbidity was performed. Average values: waist circumference 126.6 cm (92.9-180.0), waist circumference 134.3 cm (108-174), waist circumference and hips 0.93 (0.74-1.16), BMI 43.17 kg/m² (28.91-63.67), insulin 20.35 pmol/L (4.5-88.2), HOMA index 5.02 (0.9-21.95) for niacytes, of which 15 (35%) patients did not have insulin resistance. Most had a normal left ventricular ejection fraction (on average EF LV 65%). We analyzed correlations of anthropometric and laboratory findings with echocardiographic parameters and showed significantly correlated correlations. Positive significant correlation was found: LViDd and BMI (r = 0.52, BF10 is 121), LViDs and BMI (r = 0.50, BF10 = 65), LViDd and waist circumference (r = 0.56, BF10 = 150) waist circumference (r = 0.55, BF10 = 106), a stronger degree of attachment for men than female gender (R = 0.67, BF10 = 5.23), LViDs and waist circumference (r = 0.61, BF10 = 0.64, BF10 = 4.28). (R = 0.37, BF10 = 1.71), LViDd and waist circumference (r = 0.28, BF10 = 0.59), LViDs and waist circumference (r = 0.37, BF10 = 1.61), LViDs and BMI 0.18, BF10 = 0.36). Findings for diabetic and hypertensive patients: LViDd 5.55 cm (4.54-7.49), LA 3.47cm (2.88-5.96), LA area 18.30 (12.0-25.6) cm², LA volume 47.83ml (25.0-76.0), E/E' 9.83 (6.0-13), LA volume 48.82 (23.0-99.0), E/E' averaged 9.42, 41 (6.0-15.0). Adipose men with diabetes and hypertension have significantly more pronounced echocardiographic changes compared to adipose patients without comorbidity.¹⁻³

LITERATURE

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RECEIVED:
October 26, 2018

ACCEPTED:
November 5, 2018

