(303)

ORAL046-TS

ASSOCIATION BETWEEN ANTHROPOMETRIC MEASUREMENTS AND ECHO-CARDIOGRAPHIC PARAMETERS OF CHRONIC HEART FAILURES WITH HIGH NT PRO BNP, IN SRI LANKA-A PRELIMINARY STUDY

Wanshika Dilshani[1], Hemantha Peiris[1], Gotabhaya Ranasinghe[2], Rasika Perera[1]

[1]Department of Biochemistry, University of Sri Jayewardenepura, Nugegoda, Sri Lanka
[2]District General Hospital, Kalutara, Sri Lanka

wanshikad@yahoo.com

Chronic heart failure (CHF) has shown a considerable increase in prevalence which leads to a major public health burden. The impact of obesity on ventricular remodeling after myocardial infarction (MI) is still poorly understood which ultimately result in CHF. The aim of this study was to evaluate the association between selected anthropometric parameters and BMI with echocardiographic measurements in CHF patients in Sri Lanka. Body mass index (BMI) and waist, hip, mid upper arm, mid-thigh circumferences (WC, HC, MUAC and MTC) were measured in 76 CHF patients and in 76 controls. There was a significant difference in N-Terminal Pro Brain Natriuretic Peptide level in CHF patients 1705.23 ± 1696.36 pg/ml when compared with controls 69.61 ± 48.43 pg/ml ($p< 0.001$). Based on BMI of CHFs, 51% of women were overweight and 8% were obese. In men only 46% were overweight and 4% were obese. Abdominal obesity defined as WC >102 cm in CHF males (68%), and >88 cm in females (77%). Patients with CHF presented higher WC values (CHF, 99.2 ± 10.3 cm; without, 92.7 ± 10.8 cm, $P < 0.05$), and MUAC values (CHF, 38.05 ± 8.2cm; 34.70 ± 4.7cm, $p<0.05$) and MTC values (CHF, 54.46 ± 6.70cm; $p<0.05$) but there were no significant differences in the BMI and HC values. The left ventricular end diastolic diameter (CHF 53.08± 5.7cm; 38.61± 2.8 cm $p<0.001$) left ventricular end systolic diameter (CHF45.58 ±6.01cm; 33.06 ±2.4cm). Both an increase in WC and MUAC were associated with an increase in LVEDD. WC and MUAC, but not BMI, is a predictor of CHF. Therefore, the WC and MUAC of CHF patients should be measured in clinical practice. Future studies should focus on mechanisms responsible for the associations between anthropometric variables and LVEDD.

Keywords: anthropometry; waist circumference; LVEDD