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**RELATIONSHIP BETWEEN SELECTED ANTHROPOMETRIC MEASURES WITH
NT PRO BNP LEVEL REGARDING THE SEVERITY OF CHRONIC HEART
FAILURE IN SRI LANKA-A PRELIMINARY STUDY**

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ABSTRACT

Overweight and obesity are an emerging important public health problems in society, where it leads to many chronic diseases such as chronic heart failure (CHF). The purpose of this study is to determine whether there's any relationship between anthropometric measures with N terminal part of brain natriuretic peptide (NT Pro BNP) regarding the severity of heart failure in Sri Lankans. The study was conducted using 76 CHF patients with reduced ejection fraction (EF<50%), aged 45-86 years who attend to cardiology clinic at district hospital Kalutara during July 2015 to January 2016. The 76 controls were participated in the study where age and sex matched, whose EF was more than 50%. NT Pro BNP level of them were measured with their written consent and also several anthropometric measurements (height, weight and waist, hip, mid upper arm and mid-thigh circumferences) were taken. Based on BMI of CHF patients, 51% of women were overweight (BMI, 25 to 29.9 kg/m²) and 8% were obese (BMI ≥ 30 kg/m²). In men it was only 46% were overweight and 4% were obese. BMI was inversely associated with NT Pro BNP level in CHF patients (p<0.05). There was a significant difference in mean NT Pro BNP level in chronic heart failure (CHF) patients 1705.23 ± 1696.36 pg/ml (231-7963) when compared with controls 69.61 ± 48.43 pg/ml(16-181) (p< 0.001). It revealed that high circulating concentrations of NT Pro BNP were positively associated with incident chronic heart failure, but association differed according to obesity status. Also above mentioned circumference values were inversely proportional to NT Pro BNP level. With increased BMI value and increased waist and hip circumference values have increased risk of heart failure was also observed in those with low NT-Pro BNP concentrations.

Keywords: anthropometry, NT Pro BNP, chronic heart failure