

150 Katulanda, P; Jayawardena, MANAAD; Lamabadusuriya, D; **Sheriff, MHR**; Matthews, DR

Derivation of BMI and waist circumference cut-off values for Sri Lankan adults.

Abstract; Sri Lanka Medical Association -122nd Anniversary Academic Sessions; 2009_.17pp

Abstract :Introduction: Anthropometric cut-off values derived for Caucasians would be less sensitive to define obesity in Non-Caucasians. We aimed to derive BMI and WC cut-offs for Sri Lankan adults. Methods: Data were from a nationally representative sample of 4276 subjects without known diabetes. Presence of ≥ 2 of dysglycaemia (fasting glucose ≥ 5.6 mmol/l; 2-hr post OGTT glucose ≥ 7.8 mmol/l), elevated blood pressure ($\geq 130/85$ mmHg/antihypertensive therapy), low HDLC (males <1.03 mmol/l; females <1.3 mmol/l) and elevated triglycerides (>1.7 mmol/l) was considered as having high cardiovascular disease (CVD) risk. Receiver operating characteristic (ROC) curve analysis was performed using SPSS to identify BMI and WC cut-offs with optimal sensitivity and specificity to predict high CVD risk. Results: The mean age, BMI and WC were 45.2 years, 21.8kg/m² and 77.7cm. The area under the curve (AUC) for BMI for both males (M) and females (F) were 0.71 (P<0.0001). AUC for WC were M: 0.71, F: 0.72 (p<0.0001). The BMI cut-off for all adults was 21.5kg/m² and that for males and females were 20.7 kg/m² and 22.0 kg/m² respectively. The WC cut-off for men and women were 76.5cm and 76.3cm respectively. The sensitivity for the new BMI cut-off in predicting high CVD risk was 66% compared to 34% for the cut-off for overweight (25kg/m²) for Caucasians. The sensitivities for WC cut-offs recommended by the International Diabetes Federation for Asians (M: 90cm, F: 80cm) were M: 27% and F: 57%. Conclusions: Population specific anthropometric cut-offs are more sensitive in identifying those with higher CVD risk in Sri Lankans compared to those derived for Caucasians.