Comparison of Different Criterion to Determine the Metabolically Obesity but Normal Weight Among Young Students from Niterói (RJ)

Vanzan, L.[1], Elias, N.T.[1], Leme, L.[1], Ferraz, L. [1], Lopes, P.F.[1,2]

[1]Laboratório Multiusuário de Apoio à Pesquisa em Nefrologia e Ciências Médicas, Niterói, RJ, Brasil; [2]Universidade Federal Fluminense, Faculdade de Medicina, Departamento de Patologia, Niterói, RJ, Brasil.

INTRODUCTION: Metabolic obese normal weight (MONW) is a condition described nearly 30 years ago assigned to normal body mass index people who are more leaned to develop metabolic dysfunctions. Since that, many criterions were developed to identify MONW individuals. In this context, Du et al (2015) established two indexes based on biochemical and anthropometric data to track MONW patients: the Lipid Accumulation Product (LAP) and Visceral Adiposity Index (VAI). **OBJECTIVES:** to evaluate the occurence of MONW individuals among undergraduation students from Universidade Federal Fluminense according to the 6 criterion available and to apply the LAP and VAI indexes to this population. **MATERIAL AND METHODS:** the volunteers were evaluated for clinical history, biochemical tests (blood glucose, insulin, triglycerides, total cholesterol and fractions, C-reactive protein, uric acid), anthropometry, blood pressure and afterward classified according to the criterion of Ruderman, Lee, Wildman, Karelis, ATP III and HOMA-IR. Also LAP and VAI were calculated and Du`s cutoffs were used in order to identify MONW population. **RESULTS AND DISCUSSION:** We recruited 141 students: 33 volunteers were classified as obese and they were excluded; 108 volunteers attended for the inclusion criteria. According to Ruderman`s, Lee`s, Wildman`s, Karelis`s, ATP III`s and HOMA-IR`s criterion were classified as MONW: 51, 0, 6, 3, 3 and 2, respectively. When the LAP and VAI indexes were applied to the criterion Wildman`s, Karelis`s, ATP III`s and HOMA-IR the number of MONW individuals were 38, 41, 36 and 36 individuals (PAL) and 27, 32, 25 and 49 (VAI). **CONCLUSION:** Only Ruderman`s criterion take into account the medical family history, in order to classify the MONW individuals which explains the biggest number of MONW individuals comparing to the other criterions. It could be important for development of prevention strategies. Moreover, the LAP and VAI indexes seem to be great markers on identifying MONW individuals.

Keywords: Metabolic obese normal weight, obesity, students.