

Obesity and chronic renal disease in patients with hypertension as comorbidity: The optimum body mass index

Vaia D Raikou* and Sotiris Gavriil

Doctors' Hospital, Greece

Background: Obesity was associated with a greater risk for development of Chronic Kidney Disease (CKD) among subjects with and without hypertension, diabetes or cardiovascular disease. We aimed to consider the association between obesity and classified CKD according to both estimated Glomerular Filtration Rate (e-GFR) and albuminuria in people with manifested hypertension. We also aimed to observe the optimum Body Mass Index (BMI) in this population.

Methods: One hundred-thirty three overweight and/or obese subjects with manifested hypertension were enclosed and they were matched to forty-three hypertensive control subjects with a normal body weight. Our participants were classified in both eGFR and albuminuria categories according to the Kidney Disease Improving Global Outcomes (KDIGO) 2012 criteria. The obesity was defined by both a high BMI (≥ 25 Kg/m² as overweight and/or ≥ 30 Kg/m² as obese) and the existence of central obesity by Waist Circumference (WC) measurement.

Results: We observed that the most of subjects with a lean/normal BMI did not have albuminuria ($x^2=24.2$, $p=0.001$) and the most of those with high BMI in combination with a normal WC did not also have albuminuria ($x^2=39.7$, $p=0.001$). The high WC was found to be a main risk factor for albuminuria adjusting to confounders. The relationship between eGFR categories and both BMI classes and high WC was found non-significant.

Conclusion: Visceral obesity was mainly associated with the manifestation of albuminuria rather than with the declining of eGFR independently on the existence of hypertension. The optimum BMI may be in the normal range.

Biography

Vaia D Raikou is affiliated to the Department of Nephrology, Doctors' Hospital, Athens, Greece.

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