The relation of anthropometric measurements and insulin resistance in patients with autosomal polycystic kidney disease

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Introduction and aim: Autosomal polycystic kidney disease (APCKD) is the most frequent hereditary kidney disease. Insulin resistance (IR) is a common pathogenetic mechanism of APCKD and obesity. Patients with APCKD may exhibit different antropometric characteristics from obese individuals in terms of IR. We aimed to examine the relation of antropometric measurements and IR in patients with APCKD.

Material and methods: Eight two patients with APCKD that admitted to Nephrology outpatient department of Bagcilar Education and Research Hospital between February and April 2015 were enrolled. Patients with diabetes mellitus, malignancy or any other chronic disease and receiving renal replacement therapy (RRT) were excluded. Fifty eight indivduals, 25 male and 33 female, were assigned to control group. Insulin resistance was determined by HOMA-IR formula. Glomerular filtration rate was measured by modification of diet in renal disease (MDRD). Height and weight of participants were measured in Tanita Body Composition Analyzer. BMI was calculated as weight/height2 (kg/m2). Urine albumin excretion rate exceeding 20 µg/min (30 mg/day), in the absence of uncontrolled hypertension or urinary tract infection, was defined as microalbuminuria.

Findings: Patients group had significantly higher urea, creatinin, uric acid, urine protein level and urine microalbumin to creatinin (Ma/Cr) ratio. Groups had similar adipose and liquid ratio. The mean impedance of patients group was significantly lower. Male patients had higher systolic and diastolic blood pressure. Female patients had higher urine microalbumin to creatinine ratio (p:0.001). Female patients had higher mean liquid mass (p:0.008). No significant difference was observed between groups in terms of IR.

Conclusion: In contrast to healthy subjects, no signifcant association determined between IR and anthropometric measurements.

Keywords: autosomal polycystic kidney disease, anthropometric, insulin resistance

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