

## 상염색체우성다낭신 환자에서 영양상태 평가방법으로서의 생체전기 임피던스 분석의 임상적 유용성

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### Clinical Utility of Bioelectrical Impedance Analysis to Assess Nutritional Status in ADPKD Patients

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**Introduction and Aims:** Autosomal dominant polycystic kidney disease (ADPKD) patients often experience inadequate oral intake and abdominal symptoms as their cyst grow and expand. Malnutrition may increase therapeutic hospital cost and mortality when it is not appropriately assessed and managed. Recently, bioelectrical impedance analysis (BIA) has been used to evaluate nutritional risk. This study aimed to assess the clinical utility of BIA to assess nutritional status in ADPKD patients.

**Methods:** ADPKD patients who were registered at PKD clinic in Seoul National University Hospital underwent subjective global assessment (SGA) and BIA. The patients were excluded when they had an actively treated malignancy or end-stage renal disease (MDRD eGFR <15 mL/min/1.73m<sup>2</sup>). The SGA was performed with 7-point rating scale by one clinician, and it includes the patient's history, a physical examination, and the clinician's overall judgment of the patient's status. We simultaneously performed BIA (Inbody S10, Biospace, Inc.) to measure anthropometric scale. Clinical and laboratory data were collected at the same time. The association between SGA scale and 1) BIA components and 2) clinical variables were analyzed.

**Results:** A total of 196 patients (97 male, 99 female) were included in the analysis. Mean age was 49 years and their mean eGFR was 62.9±26.2 mL/min/1.73m<sup>2</sup>. Among them, 20 patients (9.9%) were mild to moderately malnourished (scale 4-5) and another 55 patients (27.2%) were at risk of malnutrition (scale 6). Advanced age, low plasma hemoglobin, low serum creatinine, low MDRD eGFR, and low serum albumin were the clinical variables associated with low SGA score. Among BIA indexes, low body weight, low waist to hip ratio (WHR), low arm circumference (AC), low arm muscle circumference (AMC), lipid, and low phase angle (PhA) were associated with low SCA score. In multivariate analysis, WHR, MDRD eGFR, and PhA were the independent variables associated with malnutrition.

**Conclusions:** Low WHR and PhA are useful BIA indexes to assess nutritional risk in ADPKD patients.

**Key Words:** 상염색체우성다낭신, 영양평가, 생체전기 임피던스 분석  
ADPKD, Nutritional assessment, BIA