

# KSN 2016 Abstract Submission

*Clinical Nephrology*

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**Comparison of bioimpedance analysis and dual-energy X-ray absorptiometry in peritoneal dialysis patients with or without autosomal dominant polycystic kidney disease**

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**Background:** There were few data regarding whether cystic fluid in autosomal dominant polycystic kidney disease (ADPKD) is associated with body composition measurement using bioimpedance analysis. The aim of the present study was to evaluate the difference between bioimpedance analysis and dual-energy X-ray absorptiometry in peritoneal dialysis patients with or without autosomal dominant polycystic kidney disease.

**Methods:** We reviewed the medical records at Yeungnam University Hospital in Korea to identify all adults who received peritoneal dialysis between January 2001 and August 2014. The patients included the study had undergone body composition measurement. Matched for age, sex, body mass index, residual renal function, 11 patients with ADPKD and 11 patients without ADPKD were included. We identified 11 ADPKD patients who had body composition measurements performed by both techniques in one or more instances, totally 26 pairs of measurements and 11 non-ADPKD patients who had body composition measurements performed by both techniques in one or more instances, totally 27 pairs of measurements.

**Results:** The mean follow-up period was  $51.4 \pm 12.8$  years in ADPKD group and was  $51.4 \pm 12.8$  years in non-ADPKD group. There were no significant differences in sex, body mass index, and residual renal function between the two groups. Biases for total fat mass were in  $-0.43$  kg (95% CI,  $-1.36$  kg to  $0.48$  kg) in ADPKD group and  $-1.68$  kg (95% CI,  $-2.57$  kg to  $-0.79$  kg) in non-ADPKD group. Those for total fat mass were  $3.32$  kg (95% CI,  $1.46$  kg to  $5.19$  kg) in ADPKD group and  $4.14$  kg (95% CI,  $2.49$  kg to  $5.80$  kg) in non-ADPKD group. Those for total bone mineral content were  $-0.86$  kg (95% CI,  $-1.09$  kg to  $-0.63$  kg) in ADPKD group and  $-0.77$  kg (95% CI,  $-0.96$  kg to  $-0.58$  kg) in non-ADPKD group.

**Conclusion:** There were no significant differences in body compositions between the two groups. Bioimpedance analysis may be applicable to measure body composition in peritoneal dialysis patients with ADPKD.

**Keywords:** Autosomal dominant polycystic kidney disease, bioimpedance, body composition