

허리-엉덩이 둘레 비율과 초기 동맥 경화의 연관성

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Waist-to-hip Ratio is Associated with Early Atherosclerosis in Patients with Peritoneal Dialysis

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Background: Waist-to-hip ratio (WHR) is associated with increased cardiovascular (CV) disease in the general population. Recent studies have reported WHR, not body mass index (BMI), is more strongly associated with CV events in non-dialysis chronic kidney disease patients. However, the association between different anthropometric indices of obesity and CV disease in patients with peritoneal dialysis has never been elucidated. The aim of this study was to evaluate whether WHR is more predictive to CV disease than other anthropometric indices in peritoneal dialysis patients, using carotid intimal-media thickness (cIMT), as a validated marker of early atherosclerosis.

Methods: The cross-sectional study was performed in 90 peritoneal dialysis patients with the measurements of cIMT, anthropometric indices and conventional CV risk factors

Results: Mean patient age was 53.3 ± 11.8 years (62.2% males). Mean cIMT was 0.74 ± 0.25 mm, and early atherosclerosis (cIMT ≥ 1 mm) was detected in 11 (12.2%) patients. In univariate analyses, WHR ($r=0.221$, $p<0.05$) was significantly correlated with cIMT (WC $r=0.177$, $p=0.095$; BMI $r=0.088$, $p=0.41$). But only the age maintained an independent association after adjustment (β 0.001, $p<0.01$). In comparison with the ability to predict early atherosclerosis (cIMT ≥ 1.0 mm), association was the strongest for WHR, intermediate for WC and the weakest for BMI. (Area under the receiver operating characteristics curve [AUC]=0.652, 0.609 and 0.602, respectively, $p<0.01$).

Conclusion: Our study showed WHR is more predictive to early atherosclerosis than other anthropometric indices of obesity in patients with peritoneal dialysis.

Key Words: 허리-엉덩이 둘레 비율, 경동맥 내중막 두께, 복막 투석

Waist-to-hip ratio, Intimal-media thickness, Peritoneal dialysis