

## 제 2형 당뇨병 환자에서 내장 지방량과 신기능과의 관계

가톨릭 대학교 의과대학 내과학교실

유지한 · 송호철 · 양철우 · 김용수 · 최의진 · 김용균 · 김 진

### Relationship of Visceral and Subcutaneous Adiposity with Renal Function in People with Type 2 Diabetes Mellitus

Jihan Yu, Ho Cheol Song, Chul Woo Yang, Yong Soo Kim, Euy Jin Choi, Yong Kyun Kim, Jin Kim

Department of Internal Medicine College of Medicine The Catholic University of Korea

**Background:** Obesity and diabetes mellitus (DM) are established risk factors for the development of chronic kidney disease. The visceral adiposity (VAT) and subcutaneous adiposity (SAT) may be associated with the differential metabolic risk. Our study was performed to determine whether VAT or SAT was associated with the deterioration of renal function in people with type 2 DM.

**Methods:** Nine hundred twenty-nine people with type 2 DM (488 women and 441 men) and who had undergone abdominal computed tomography assessment of the SAT and VAT areas were included. The estimated glomerular filtration rate (eGFR) was calculated using the Modification of Diet in Renal Disease four-variable equation at the time of the assessment of the SAT and VAT areas.

**Results:** The mean visceral fat area was  $118 \pm 56 \text{ cm}^2$  in women and  $126 \pm 65 \text{ cm}^2$  in men. The mean subcutaneous fat area was  $192 \pm 79 \text{ cm}^2$  in women and  $124 \pm 66 \text{ cm}^2$  in men. The visceral fat area was independently associated with the eGFR after adjustment for age, gender, the duration of diabetes, the systolic blood pressure, the diastolic blood pressure, the serum triglyceride, the homeostasis model for insulin resistance score, uric acid and urinary albumin excretion ( $\beta$ -coefficient =  $-0.075$ ,  $p=0.034$ ), while the body mass index, total fat area and subcutaneous fat area were not significantly associated with the eGFR.

**Conclusion:** Our data suggest that VAT might be an additional prognostic factor for the deterioration of renal function in people with type 2 DM.

**Key Words:** 내장 비만, 당뇨병, 사구체 여과율

Adiposity, Siabetes mellitus, Glomerular filtration rate