

## Nonfunctioning adrenal incidentaloma may be at a higher metabolic disease risk

노원을지대학교병원 내과<sup>1</sup>, 노원을지대학교병원 가정의학과<sup>2</sup>

장삼열<sup>1</sup>, 정경연<sup>1</sup>, 권길영<sup>2</sup>, \*김효정<sup>1</sup>

**Background/Aims:** Although metabolic syndrome was prevalent in patients with autonomous cortisol secretion, there are limited data for those with nonfunctioning adrenal incidentaloma (NFAI). This study aimed to compare metabolic features and body composition of patients with NFAI to referent subjects without adrenal mass.

**Methods:** This study included 141 patients with biochemically confirmed NFAI and 1:3 age and sex matched controls without adrenal incidentaloma (n=420) among subjects who underwent both abdominal computed tomography and dual-energy X-ray absorptiometry (DEXA) at a Eulji healthcare center in 2013-2020. Among 141 patients with NFAI, 48 patients underwent DEXA, so we evaluated body composition of these patients compared to 1:3 age, sex and underlying metabolic disease matched controls (n=143).

**Results:** Mean age was  $56.5 \pm 12.0$  years and 52% were women in 141 patients with NFAI. The NFAI group had a higher body mass index compared to control group ( $25.1 \pm 4.1$  vs.  $24.1 \pm 3.4$  kg/m<sup>2</sup>, p=0.011). Age, sex and BMI adjusted logistic regression showed significantly higher odds ratios (ORs) for diabetes, hypertension and dyslipidemia in NFAI (OR [95% confidence interval], 2.33 [1.45-3.74], 1.92 [1.22-3.03] and 2.26 [1.48-3.45], respectively. The body fat index ( $8.0 \pm 0.3$  vs.  $7.1 \pm 0.1$  kg/m<sup>2</sup>, p=0.027) and total fat mass ( $20.7 \pm 0.5$  vs.  $18.5 \pm 0.3$  kg, p=0.005) were higher and skeletal muscle index was lower ( $6.4 \pm 0.1$  vs.  $6.7 \pm 0.1$  kg/m<sup>2</sup>, p=0.042) in NFAI group compared to control.

**Conclusions:** Patients with NFAI were associated with higher risk for diabetes, hypertension and dyslipidemia and demonstrated abnormal body composition. Even a non-functioning hormone status may impact metabolic feature in patients with adrenal incidentaloma.