

Long-Term Follow-Up in Adrenal Incidentalomas: An Italian Multicenter Study

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Context: The long-term consequences of subclinical hypercortisolism (SH) in patients with adrenal incidentalomas (AIs) are unknown.

Setting and Patients: In this retrospective multicentric study, 206 AI patients with a ≥ 5 -year follow-up (median, 72.3 mo; range, 60–186 mo) were enrolled.

Intervention and Main Outcome Measures: Adrenocortical function, adenoma size, metabolic changes, and incident cardiovascular events (CVEs) were assessed. We diagnosed SH in 11.6% of patients in the presence of cortisol after a 1 mg-dexamethasone suppression test $>5 \mu\text{g/dL}$ (138 nmol/L) or at least two of the following: low ACTH, increased urinary free cortisol, and 1 mg-dexamethasone suppression test $>3 \mu\text{g/dL}$ (83 nmol/L).

Results: At baseline, age and the prevalence of CVEs and type 2 diabetes mellitus were higher in patients with SH than in patients without SH (62.2 ± 11 y vs 58.5 ± 10 y; 20.5 vs 6%; and 33.3 vs 16.8%, respectively; $P < .05$). SH and type 2 diabetes mellitus were associated with prevalent CVEs (odds ratio [OR], 3.1; 95% confidence interval [CI], 1.1–9.0; and OR, 2.0; 95% CI, 1.2–3.3, respectively), regardless of age. At the end of the follow-up, SH was diagnosed in 15 patients who were without SH at baseline. An adenoma size >2.4 cm was associated with the risk of developing SH (sensitivity, 73.3%; specificity, 60.5%; $P = .014$). Weight, glycemic, lipidic, and blood pressure control worsened in 26, 25, 13, and 34% of patients, respectively. A new CVE occurred in 22 patients. SH was associated with the worsening of at least two metabolic parameters (OR, 3.32; 95% CI, 1.6–6.9) and with incident CVEs (OR, 2.7; 95% CI, 1.0–7.1), regardless of age and follow-up.

Conclusion: SH is associated with the risk of incident CVEs. Besides the clinical follow-up, in patients with an AI >2.4 cm, a long-term biochemical follow-up is also required because of the risk of SH development. (*J Clin Endocrinol Metab* 99: 827–834, 2014)