Abstract
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Associated factors with metabolic syndrome in elderly patients harboring adrenal incidentaloma: A comparative study

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ABSTRACT

Background and Aims: Growing scientific evidence supports the hypothesis of an increased cardiometabolic risk in patients harboring adrenal incidentalomas (AI). Despite the high incidence of both conditions in the elderly, limited data are available about this association. We aim to assess the prevalence of MetS and its associated factors in aged patients harboring AI.

Patients and Method: We conducted a retrospective comparative study including 69 geriatric patients diagnosed with AI in our endocrinology center (2011-2020). MetS was diagnosed based on the National Cholesterol Education Program's Adult Treatment Panel III criteria. We compared two groups :
[MetS+] : elderly subjects with MetS(n=17)
[MetS-] : elderly subjects without MetS(n=52)

Results: There was no significant age diffrence between both groups ([MetS+] :72.1 vs [MetS=] 71.0 years old ; p=0.82). Female gender was significantly associated with MetS ([MetS+] 82.4% vs [MetS-] 39.1% ; p=0.006). Patients bearing bilateral AI were significantly more affected by MetS ([MetS+] 58.8% vs [MetS-] : 4.3% ; p=0.000) compared to those having unilateral AI. Smaller incidentaloma size aggravates substantially the risk of developing MetS ([MetS+] 21.0 vs [MetS-] :26.7 mm ; p=0.009). Higher phosphatemia was statistically linked to the presence of MetS ([MetS+] 1.30 vs [MetS-] : 0.96 mmol/l ; p=0.018). We noted no significant correlation between hormonal hypersecretion and MetS in older adults, since there was a comparable distribution of functioning and nonfunctioning AI in the two groups(p=0.693).

Conclusion: AI is associated with a higher cardiometabolic risk, particularaly in advanced age. Metabolic abnormalities are classically attributed to hormonal hypersecretion. Several studies have proven that insulin resistance and related distrubances also occur in nonfunctioning AI. Our results suggest that bilateral and smaller AI may worsen the risk of metabolic dyregulation in geriatric patients, regardless of their secreting profile. Further research is needed to elucidate this hypothesis.