THE ASSOCIATION OF INSULIN RESISTANCE AND MILD COGNITIVE IMPAIRMENT IN ELDERLY PATIENTS WITH ALZHEIMER'S DISEASE

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KEYWORDS

Insulin resistance; diabetes mellitus; alzheimer's disease; mild cognitive impairment; elderly.

BACKGROUND

Insulin functions as a neuropeptide in the brain, and in the absence of diabetes mellitus (DM), its dysfunction is associated with a higher incidence of neurodegenerative diseases. Dysfunction in insulin secretion could have an adverse effect on the development of Alzheimer's disease (AD).

OBJECTIVE

The association between insulin resistance (IR) and mild cognitive impairment (MCI) in elderly patients with AD has been studied.

METHODS

This cross-sectional study examined 104 elderly patients with AD over 60 years old between February 2023 and September 2023. In addition to anthropometry, grip strength (as measured by a hand-held dynamometer), and past medical history, the Barthel index was used to monitor variations in impairment. The HOMA-IR, American Diabetes Association criteria, and CERAD-NB were used to assess IR, DM, and MCI.

RESULTS

104 elderly patients with AD (mean age: 72.6±8.2 years [range: 61–82]; 62 [59.6%] women; body mass index [28.6±4.8]) were enrolled. Among the comorbidities, 73 (70.2%) patients with systemic arterial hypertension had mean fasting blood glucose (96.8±22.7mg/dL), fasting insulin levels (12.4±6.9uIU/mL), and HbA1c (6.6±2.5%). Male patients with low education (RR, 5.6; 95% CI: 2.9–9.3, p<0.001), age ⩾75 years (RR, 5.1; 95% CI: 2.9–8.5, p<0.001), decreased grip strength (RR, 2.4; 95% CI: 1.3–3.9, p<0.001), and decreased functionality (RR, 1.4; 95% CI: 1.8–3.8, p=0.03) were more likely to have MCI.

CONCLUSION

A higher prevalence of MCI at high index values with a J-curve was associated with IR. However, the association was influenced by factors such as low education and advanced age.

FUNDING AND CONFLICTS OF INTEREST

No financial support was received for the study and the authors declare no conflicts of interest.

21st World Congress Insulin Resistance WCIRDC DIABETES & CARDIOVASCULAR DISEASE

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