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LETTER

Impaired Sensitivity to Thyroid Hormones Is Associated with Mild Cognitive Impairment in Euthyroid Patients with Type 2 Diabetes [Letter]

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Dear editor

We extend our appreciation to Yu et al for their original publication entitled "Impaired Sensitivity to Thyroid Hormones is Associated with Mild Cognitive Impairment in Euthyroid Patients with Type 2 Diabetes"[1] in Journal Clinical Interventions in Ageing, which presents us with some novel ideas.

This study mainly explored the association between mild cognitive impairment (MCI) and thyroid hormone sensitivity in euthyroid type 2 diabetes mellitus (T2DM) patients. The study eventually concluded that impaired sensitivity to thyroid hormones is associated with MCI in euthyroid patients with T2DM.

Given their extensive and continuous research in this field over the years, we wholeheartedly agree with the conclusions the China Medical University endocrine metabolism team reached. However, the design of this study, particularly the exclusion criteria, still requires refining to provide precise data for routine clinical practice. The following points, in our opinion, require further clarification. First, there is a lack of Vitamin D data. In older people with T2DM, vitamin D level is tightly related to cognitive function.[2] Usually, the vitamin D levels of Chinese people are generally low. Second, there is a lack of bone mineral density (BMD) and bone turnover markers (BTMs) data. According to extensive evidence-based evidence, patients with osteoporosis and bone loss often suffer from mild cognitive impairment.[3] Thirdly, lack of nutrition status data. Nutritional status, including anemia, hypoproteinemia, and hyponatremia, is strongly connected with cognitive impairment.[4] Finally, there is a lack of an estimated glomerular filtration rate (eGFR). Cognitive impairment usually occurs in CKD.[5]

As a result, the essential way to get the correct findings from the study design is to include the four scenarios indicated above in the exclusion criteria. Despite a few flaws, we nevertheless value the authors' original viewpoint. Their findings will remind clinicians to pay closer attention to impaired cognition in euthyroid patients with T2DM as early as possible and adopt effective intervention strategies to prevent the occurrence of cognitive impairment to enhance patient quality of life in clinical practice.

Disclosure

The authors report no conflicts of interest in this communication.

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