

Association Between Sensitivity to Thyroid Hormones and Metabolic Dysfunction-Associated Fatty Liver Disease in Euthyroid Subjects: A Cross-Sectional Study [Letter]

Jiaxia Han, Wensheng Lu 

Department of Endocrinology, People's Hospital of Guangxi Zhuang Autonomous Region, Nanning, Guangxi, People's Republic of China

Correspondence: Wensheng Lu, Email Lwsqxqz@163.com

Dear editor

Recently, Liu et al published an original article titled “Association Between Sensitivity to Thyroid Hormones and Metabolic Dysfunction-Associated Fatty Liver Disease in Euthyroid Subjects: A Cross-Sectional Study” in *Diabetes, Metabolic Syndrome and Obesity-Targets and Therapy*.¹ Since we are undertaking a pertinent longitudinal cohort study, we are highly interested in this article. We appreciate the authors for their work and congratulate them on their successes.

This study focused primarily on the current hotspot of metabolic dysfunction-associated fatty liver disease (MAFLD) and explored the relationship between thyroid hormone and MAFLD. They concluded that increased free triiodothyronine to free thyroxine (FT3/FT4) ratio and thyroid feedback quantile-based indices (TFQI_{FT3}) were significantly related to MAFLD in populations with euthyroid, in which the triglyceride-glucose (TyG) index played a partial mediating role.

Although we largely concur with the study's findings, four ambiguous points should be clarified to inform clinical practice properly. Firstly, imbalanced baseline data on the age and gender of recruited subjects will unavoidably affect statistical findings. Secondly, lack of data on Hashimoto thyroiditis-related antibodies, such as thyroid peroxidase antibodies (TPOAb) and thyroglobulin antibodies (TGAAb) in the euthyroid period. Hashimoto thyroiditis is closely associated with thyroid autoimmunity.² However, autoimmunity dysfunction is an essential factor for MAFLD.³ Thirdly, lack of data on the critical biochemical indicator vitamin D. Vitamin D plays a significant role in immunoregulation, anti-inflammatory, anti-fibrotic, and insulin sensitivity in hepatic cells and is involved in immune-metabolic pathways within the gut-adipose tissue-liver axis.⁴ Hypovitaminosis D is associated with NAFLD and steatohepatitis.⁴ According to reports, hypovitaminosis D is general in the Chinese population.⁵ Fourthly, this study is a single-center cross-sectional study with a relatively small scale. The conclusion of this study still needs to be confirmed by multicenter and prospective cohort studies.

Despite several flaws, the concerns this article addressed are crucial, and the conclusions have a significant guiding value for clinical practice.

Disclosure

The authors report no conflicts of interest in this communication.

References

1. Liu H, Xing Y, Nie Q, et al. Association between sensitivity to thyroid hormones and metabolic dysfunction-associated fatty liver disease in euthyroid subjects: a cross-sectional study. *Diabetes Metab Syndr Obes.* 2023;16:2153–2163. doi:10.2147/DMSO.S420872
2. Ludgate M, Emerson CH. Metamorphic thyroid autoimmunity. *Thyroid.* 2008;18(10):1035–1037. doi:10.1089/thy.2008.1551

3. Huby T, Gautier EL. Immune cell-mediated features of non-alcoholic steatohepatitis. *Nat Rev Immunol*. 2022;22(7):429–443. doi:10.1038/s41577-021-00639-3
4. Barchetta I, Agata Cimini F, Gisella Cavallo M. Vitamin D and Metabolic Dysfunction-Associated Fatty Liver Disease (MAFLD): an update. *Nutrients*. 2020;12(11):3302. doi:10.3390/nu12113302
5. Bai K, Dong H, Liu L, et al. Serum 25-hydroxyvitamin D status of a large Chinese population from 30 provinces by LC-MS/MS measurement for consecutive 3 years: differences by age, sex, season and province. *Eur J Nutr*. 2023;62(3):1503–1516. doi:10.1007/s00394-023-03094-z

Dove Medical Press encourages responsible, free and frank academic debate. The content of the Diabetes, Metabolic Syndrome and Obesity 'letters to the editor' section does not necessarily represent the views of Dove Medical Press, its officers, agents, employees, related entities or the Diabetes, Metabolic Syndrome and Obesity editors. While all reasonable steps have been taken to confirm the content of each letter, Dove Medical Press accepts no liability in respect of the content of any letter, nor is it responsible for the content and accuracy of any letter to the editor.

Diabetes, Metabolic Syndrome and Obesity

Dovepress

Publish your work in this journal

Diabetes, Metabolic Syndrome and Obesity is an international, peer-reviewed open-access journal committed to the rapid publication of the latest laboratory and clinical findings in the fields of diabetes, metabolic syndrome and obesity research. Original research, review, case reports, hypothesis formation, expert opinion and commentaries are all considered for publication. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/diabetes-metabolic-syndrome-and-obesity-journal>

<https://doi.org/10.2147/DMSO.S434577>