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Letters to the editor

Comment on "Role of waist circumference, body mass index and high-sensitivity C-reactive protein in pediatric steatotic liver disease: A cross-sectional study"

Dear Editor:

Wu et al. [1] conducted a cross-sectional study to examine the associations between waist circumference (WC), body mass index (BMI), and high-sensitivity C-reactive protein (hs-CRP) in pediatric patients with steatotic liver disease (SLD). This research addressed the increasing prevalence of obesity-related liver disorders in pediatric populations, with the objective of identifying effective, non-invasive markers for early diagnosis. The findings revealed significant relationships between hs-CRP, standardized waist circumference (ZWC), standardized BMI (ZBMI), and the incidence of SLD, along with related metabolic markers. In the multivariate logistic regression analysis, ZWC and male sex emerged as significant predictors of SLD, with odds ratios (95% confidence intervals) of 23.431 (7.253−75.697) and 7.927 (2.766−22.713), respectively. ZBMI lost its significance as a predictor after adjustment, which is an important point to consider. Nonetheless, certain potential issues warrant further investigation.

First, as stated in the title, this study [1] used a cross-sectional technique. This method is useful for discovering connections between variables at a certain time; however, it does not allow for the drawing of conclusions about temporal or causal links. Consequently, the authors' assertion that waist circumference Z score (ZWC) and male sex are distinct risk factors for pediatric steatotic liver disease may be deemed exaggerated. The designation of a variable as a "risk factor" implies a causal or directional relationship that cannot be definitively established with cross-sectional data. An alternative interpretation could suggest that ZWC and male sex are independently linked to the occurrence of steatotic liver disease within this population. Longitudinal studies are essential for confirming causality and elucidating temporal relationships.

Second, the study [1] indicated that the area under the curve (AUC) for ZWC in predicting SLD was 0.923 (0.889−0.949, $p < 0.001$) for boys and 0.920 (0.874−0.954, $p < 0.001$) for girls, implying a strong diagnostic capability. Nonetheless, as shown in Table 2, there were notable differences in various metabolic and biochemical parameters—including the aspartate aminotransferase/alanine aminotransferase ratio, high-density lipoprotein cholesterol (HDL-C), and insulin levels—between the SLD and control groups. The presence of these variables could serve as confounders, potentially affecting the observed relationship between ZWC and SLD. It is crucial to account for these factors through multivariable models to more precisely evaluate the independent diagnostic value of ZWC.

Third, the study [1] stated that "after fasting overnight for at least 8 hours, fasting blood samples were collected for laboratory examination." Nonetheless, the actual fasting durations probably differed significantly among participants. Some individuals may have fasted for the minimum of 8 hours, while others might have undergone fasting periods lasting up to 18 hours. The considerable variability can result in notable measurement bias, especially impacting biomarkers such as insulin and fasting blood glucose, which are recognized to change with the duration of fasting. This discrepancy could undermine the reliability and consistency of the metabolic data. Standardizing a more precise fasting time, such as 8 to 12 hours, in the blood collection technique is essential for enhancing the reliability of laboratory data and minimizing the risk of confounding factors.

Declaration of competing interest

None.

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Reference

[1] Wu Q, Peng Y, Gong C. Role of waist circumference, body mass index and high-sensitivity C-reactive protein in pediatric steatotic liver disease: a cross-sectional study. Ann Hepatol 2024;30(1):101759. https://doi.org/10.1016/j.aohep.2024.101759.

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