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CORRESPONDENCE

Author's reply to: Comments to: Relation between interleukin-13 and annexin-V levels and carotid intima-media thickness in nephrotic syndrome

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- **Use of multiple measurement sites:** The use of a single site for carotid intima-media thickness (CIMT) measurement at the far wall of the common carotid artery (CCA) was a methodological decision aimed at maintaining consistency. Several studies have shown that the CIMT values measured at different segments (CCA, carotid bifurcation, and internal carotid artery) predict future cardiovascular events to nearly the same extent (1), so we have chosen the common site of measurements in all studies. CIMT should measure at least 5 mm below the end of CCA and in the far wall to eliminate interindividual variability induced by physiological remodeling and to reduce the dependence on instrument gain (2). However, we agree that a composite measure including multiple sites would provide a more comprehensive assessment.
- **Measurement of CIMT with cardiac cycle synchronization**: While it is acknowledged that synchronizing CIMT measurements with the cardiac cycle enhances precision, it is important to consider the specific context of pediatric patients. Children generally have higher heart rates and more variable cardiac cycles compared to adults, which can pose additional challenges in achieving precise synchronization. Therefore, several studies on children measured CIMT and did not mention synchronization with the cardiac cycle (3-5); however, we were careful with all cases and control to start measurements after 10 minutes of rest, repeating measurements three times on each side and the average of the measurements was taken. Despite these challenges, future research should aim to incorporate cardiac cycle synchronization to improve the accuracy of CIMT measurements in pediatric populations.
- **Variability in cardiac phases:** The differences observed in CIMT measurements during different phases of the cardiac cycle (systole and diastole) are particularly relevant in children due to their higher heart rates and rapid changes in vascular dynamics. The thinner walls during systole and thicker walls during diastole can lead to significant measurement variability. Addressing this variability requires advanced imaging techniques and equipment capable of real-time cardiac cycle synchronization as semiautomated edge detection software and CIMT should be measured at the same point on the echocardiogram to overcome this variation (6), which may not always be available in all clinical settings.
- **Diagnostic and prognostic value**: We appreciate the critique regarding the diagnostic and prognostic value of CIMT measurements. The CIMT values in our patient group (0.49 ± 0.06 mm) align with normal ranges, suggesting limited prognostic utility in this context. The study's aim was primarily to explore associations rather than definitive prognostic predictions.

In conclusion, while our study has methodological limitations, it highlights important associations between CIMT and nephrotic syndrome in children. We recognize the need for advanced techniques to mitigate the impact of cardiac cycle variability and enhance the precision of CIMT measurements. We recommend that future research focus on these methodological improvements to provide more accurate assessments of cardiovascular risk in pediatric populations.

Disclosures

Conflict of interest: The authors have no conflicts of interest in this work.

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