MATTERS ARISING

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Preclinical atherosclerosis and asthma



Christian Saleh^{1*} and Hrvoje Budincevic¹

Dear Editor,

Winder and colleagues published in the January 2022 issue of the BMC an article titled, "The association of allergic asthma and carotid intima-media thickness in adolescence: data of the prospective early vascular ageing (EVA)-Tyrol cohort study", investigating the relationship between asthma and cardiovascular risk factors (CVRF) [1]. The authors write, "In recent years, evidence has accumulated that asthma is associated with cardiovascular disease (CVD). ...Given the important role of inflammatory processes and the immune system in human atherogenesis, it is plausible that subjects suffering from chronic inflammation-a hallmark characteristic of asthma-are more prone to CVD" [1]. To investigate this potential relationship, the authors used the carotid artery intima-media thickness (cIMT) as an ultrasonographic surrogate marker of pre-clinical atherosclerosis. In their community-based, non-randomized controlled trial involving 1,506 subjects with a mean age of 17.8 years (standard deviation: 0.90), 58 subjects (3.9%) had allergic asthma, 268 subjects (17.8%) had a physician-diagnosed inhalant allergy, 22 subjects (1.5%) had non-allergic asthma, and 1,158 subjects (76.8%) had no asthma or inhalant allergies. The measurement of the cIMT occurred on the distal wall of the common carotid arteries (CCA) by high-resolution ultrasound. The authors write, "Three representative measurements in longitudinal images on the distal 4 cm on both sides were done on digitally stored images by a single rater, experienced in ultrasound techniques without information

¹2- Stroke and Intensive Care Unit, Department of Neurology, Sveti Duh University Hospital, Zagreb, Croatia. Faculty of Medicine, Department of Neurology and Neurosurgery, JJ. Strossmayer University of Osijek, Osijek, Croatia





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^{*}Correspondence:

Christian Saleh

chs12us75010@yahoo.com

increased cIMT, there is a consensus that a cIMT less than 600 μ m is normal [4]. The mean cIMT (430.8 μ m) in the asthma group by Winder et al. [1] falls still and largely within the normal range of cIMT and has consequently no diagnostic or prognostic value. There is a need for standardization of cIMT measurements among different age groups. Winder et al.'s conclusion that "Physicians should therefore be aware of allergic asthma as a potential CVRF in children and adolescents" [1], should be analyzed within the above-mentioned limitations of the applied methodology.

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Author contributions

Christian Saleh wrote original draft, revised and approved final version. Hrvoje Budincevic co-wrote manuscript, revised and approved final version.

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Data availability

No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate $\ensuremath{\mathsf{N/A}}\xspace.$

Consent for publication

N/A.

Competing interests

The authors declare no competing interests.

Clinical trial number

Not applicable.

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