Letters To The Editor

Commentary on Viewpoint: The human cutaneous circulation as a model of generalized microvascular function

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CUTANEOUS MICROVASCULATURE AS A TOOL TO INVESTIGATE SYSTEMIC MICROVASCULAR FUNCTION. REALITY OR DREAM?

TO THE EDITOR: The potential ability of peripheral measurements to detect and predict systemic vascular disease has given rise to much interest, with a specific focus on coronary dysfunction. Indeed, flow-mediated dilation (FMD) of the brachial artery is currently used as a marker of the nitric oxide (NO)-dependent vasodilation of conductance arteries. Similarly, heterogeneous investigations have been focused on the potential interest of cutaneous postocclusive reactive hyperemia (PORH), thermal hyperemia, or acetylcholine iontophoresis hyperemia, recorded on the forearm or the finger pad using laser-Doppler flowmetry, as a surrogate marker of systemic microvascular endothelial function (1). While the late plateau of thermal hyperemia is partly NO dependent (5), controversy still exists over the implication of NO in the PORH response (4, 6), while acetylcholine induced dilation is not NO dependent. However, the very recent demonstration that endothelium-derived hyperpolarizing factors are implicated in the PORH the response opens a new area of investigation (3). Indeed, as highlighted by Holowatz et al. (2), challenging skin microcirculation may provide a unique opportunity to investigate systemic endothelial function, with a specific interest in EDHF and NO when combining thermal hyperemia and PORH. However, one major issue remains the lack of consensus in the expression of this data, specifically concerning the reference to baseline flux, a highly variable parameter. We need to further standardize the way we express cutaneous blood flow, minimizing variability, before we can think about using such promising tools as surrogate markers of systemic endothelial microvascular function in large clinical trials.

REFERENCES

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