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P82 Impaired Skin Microvascular Function in Systemic Lupus Erythematosus

Nikolaos Koletsos[1,*], Eugenia Gkaliagkousi[1], Antonios Lazaridis[1], Panagiota Anyfanti[1], Areti Triantafyllou[1], Konstantina Dipla[2], Panagiotis Dolgyras[1], Vasiliki Galanopoulou[3], Spyros Aslanidis[4], Stella Douma[1]

[1]*3rd Department of Internal Medicine, Papageorgiou Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece*
[2]*Exercise Physiology and Biochemistry Laboratory, Department of Sports Science at Serres, Aristotle University of Thessaloniki, Serres, Greece*
[3]*Rheumatology Department, Papageorgiou Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece*
[4]*Rheumatology Department-2nd Propedeutic Department of Internal Medicine, Hippokration Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece*

ABSTRACT

Objectives: Alterations in skin microcirculation have been associated with damage in various microvascular beds [1]. Endothelial dysfunction in microcirculation plays a central role in the pathophysiology of rheumatic diseases, contributing substantially to the increased cardiovascular risk of these patients. Laser speckle contrast analysis (LASCA) is a novel non-invasive technique that can be used to evaluate endothelial function of skin microcirculation [2]. Previous studies have shown impaired skin endothelial function in patients with systemic sclerosis. To our knowledge, no previous study has evaluated skin microcirculation in patients with SLE using LASCA [3,4].

Design and Methods: Fifty-two individuals (25 SLE patients and 27 matched controls) were studied. In all subjects, forearm skin blood flow was recorded under standardized conditions using a laser speckle contrast imager (PeriCam PSI NR System, Perimed). Post-occlusive reactive hyperemia (PORH) was assessed following a standardized protocol and data were analyzed with signal processing software (PIMSoft, Perimed). The amplitude of PORH responses was expressed as a percentage increase between peak and baseline perfusion (%).

Results: There were no differences among the two groups in age, sex, body mass index and hypertension status. Post occlusion reperfusion in SLE patients, was significantly lower as compared to non-SLE controls (155.5 ± 53.1 vs 194.5 ± 40.5% respectively, $p = 0.004$).

Conclusion: Patients with SLE demonstrate impaired skin microvascular endothelial function, providing a link that could explain the increased cardiovascular risk that these patients bear.

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[*]*Corresponding author. Email: nick.koletsos@gmail.com*