

# Subclinical atherosclerosis in patients with psoriasis



Ilknur Balta<sup>a</sup>, Sevket Balta<sup>b,\*</sup>, Ibrahim Karademir<sup>c</sup>, Sait Demirkol<sup>d</sup>,  
Cengiz Ozturk<sup>d</sup>, Turgay Celik<sup>d</sup>

<sup>a</sup>Department of Dermatology, Eskişehir State Hospital, Eskişehir

<sup>b</sup>Department of Cardiology, Eskişehir Military Hospital, Eskişehir

<sup>c</sup>Department of Radiology, Eskişehir Military Hospital, Eskişehir

<sup>d</sup>Department of Cardiology, Gulhane Medical Academy Ankara

<sup>a,b,c,d</sup> Turkey

Dear Editor

We read with great interest the recently published article entitled 'Evaluation of subclinical atherosclerosis in Egyptian psoriatic patients' by Elsheikh et al. [1]. In that very well-presented article, the authors evaluated the presence of subclinical atherosclerosis in patients with psoriasis by using carotid ultrasonography. They concluded that the average common carotid-intima media thickness (cIMT), internal diameter (ID) and arterial wall mass index (AWMI) can identify patients with subclinical atherosclerosis who need special follow-up to reduce cardiovascular morbidity and mortality. Given the prognostic value of this test, patients with psoriasis might be at risk for future cardiovascular events and cardiovascular mortality.

Psoriasis as a chronic inflammatory proliferative skin disorder is diagnosed by a variety of

immunologic and inflammatory changes and may similarly predispose for those disorders [2]. It is speculated that increased inflammation of psoriasis contributes to atherogenesis, the development of coronary artery disease. We previously investigated the relation between psoriasis and atherosclerotic pattern as arterial stiffness parameters (ASPs). We concluded that psoriasis patients had higher ASPs compared with control subjects [3]. Therefore, because ASPs were higher in psoriasis patients, they may have shown subclinical atherosclerosis in these patients. Secondly, psoriasis is associated with an increased risk of cardiovascular disease. Endothelial dysfunction is widely regarded as being the initial process in the development of atherosclerosis. Human endothelial cell-specific molecule-1 (endocan) is a novel human endothelial cell-specific molecule. Serum endocan levels were significantly different between the two groups. Psoriasis vulgaris is

**Disclosure:** Authors have nothing to disclose with regard to commercial support.

Received 12 December 2014; accepted 21 March 2015.  
Available online 28 March 2015

\* Corresponding author at: Department of Cardiology, Eskişehir Military Hospital, Vişnelik Mah., Atatürk Cd. 26020 Akarbaşı, Eskişehir, Turkey. Tel.: +90 222 220 45 30; fax: +90 222 230 34 33.  
E-mail address: [drsevketb@gmail.com](mailto:drsevketb@gmail.com) (S. Balta).



P.O. Box 2925 Riyadh – 11461KSA  
Tel: +966 1 2520088 ext 40151  
Fax: +966 1 2520718  
Email: [sha@sha.org.sa](mailto:sha@sha.org.sa)  
URL: [www.sha.org.sa](http://www.sha.org.sa)



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Peer review under responsibility of King Saud University.  
URL: [www.ksu.edu.sa](http://www.ksu.edu.sa)  
<http://dx.doi.org/10.1016/j.jsha.2015.03.006>



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associated with an increased risk of atherosclerosis. cIMT levels are markers of systemic inflammation and are widely used as a prominent marker for cardiovascular diseases. Patients with psoriasis had a significantly greater cIMT compared with control subjects [4]. In patients with psoriasis, serum endocan levels correlated with the psoriasis area and severity index, high-sensitivity C-reactive protein (hsCRP) and cIMT [2]. Circulating endocan may represent a new marker that correlates with cardiovascular risk as well as the severity of disease in patients with psoriasis vulgaris. Endocan may be a surrogate endothelial dysfunction marker and may have a functional role in endothelium-dependent pathological disorders [2]. Psoriatic disease patients with inflammatory arthritis were closely associated with higher risk of metabolic syndrome. Psoriatic arthritis patients have significantly higher cIMT values compared to patients with psoriasis alone. It would be useful, and results might be different, if the authors had described these factors.

Different conditions such as diabetes mellitus, hypertension, asthma, various cancers, and inflammatory diseases such as systemic lupus erythematosus, rheumatoid arthritis, alcohol consumption, smoking, hypercholesterolemia, hypothyroidism, obstructive sleep apnea, nonalcoholic fatty liver disease, heart failure, cerebrovascular disease, and peripheral arterial disease that may be built on common pro-inflammatory conditions are functionally linked to the same etiologic factor [5]. For these reasons, had the authors mentioned these factors, the results of their study may have been different.

In conclusion, markers of inflammation are useful for the prediction of subclinical atherosclerosis. However, while cIMT easily detects inflammation and is readily available for clinical purposes, serum cIMT levels are used as non-invasive markers in the assessment of subclinical atherosclerosis in the study by Elsheikh et al and these can be affected by many factors. cIMT itself with no other inflammation markers may not provide enough information to clinicians about atherosclerosis in psoriasis patients. We think that it should be used together with other inflammatory markers. We believe such findings will prompt further studies on cIMT and the atherosclerotic pattern in psoriasis patients.

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