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Plasma levels of chemerin, leptin and psoriasin as potential markers of subclinical atherosclerosis in psoriasis patients

Background & Objectives: Chemerin, leptin and psoriasin are pro-inflammatory and immune-modulatory proteins associated with psoriasis and displayed higher circulating levels. Their relation to atherosclerosis in psoriatic patients has been investigated in numerous studies with wide-ranging results. Therefore, the present study aimed to assess plasma levels of chemerin, leptin and psoriasin and evaluate their relationship with carotid intima-media thickness (CIMT) and epicardial fat thickness (EFT) as potential predictors for subclinical atherosclerosis in psoriasis patients.

Patients & Methods: The study included 50 psoriatic patients and 40 age and gender matched healthy controls. Clinical severity of psoriasis was evaluated by psoriasis area and severity index (PASI). Fasting blood glucose and lipid profile were estimated. Plasma levels of high sensitivity-CRP (hs-CRP), chemerin, leptin and psoriasin were measured by ELISA. CIMT and EFT were assessed by ultrasonography and echocardiography, respectively.

Results: Plasma levels of hs-CRP, chemerin, leptin and psoriasin as well as CIMT and EFT were significantly elevated in psoriasis patients compared to controls ($P<0.001$). CIMT and EFT were significantly positively correlated with PASI, plasma hs-CRP, chemerin, leptin and psoriasin ($P<0.001$). Moreover, significant positive correlation was demonstrated between PASI and plasma hs-CRP, chemerin, leptin and psoriasin ($P<0.001$). Multiple linear regression analyses showed that chemerin, leptin and psoriasin were independently correlated with CIMT and EFT and exhibited high significance for predicting their values.

Conclusion: It can be concluded that chemerin, leptin and psoriasin might represent an important link between psoriasis and atherosclerosis. Measurements of plasma chemerin, leptin and psoriasin along with CIMT and EFT seem to be valuable potential markers of subclinical atherosclerosis in patients with psoriasis.

Biography

Waleed Abdou Ibrahim Hamed has completed his MD degree from Menoufia University. He is Assistant Professor of Cardiology in Faculty of Medicine, Menoufia University. He has published more than 30 papers in different cardiology journals and conferences.

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