

■ Utjecaj antihipertenzivnog liječenja na imunost Effects of antihypertensive treatment on immunity

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Objective: Innate and adaptive immune responses have been involved in arterial hypertension. We conducted a study about Toll-like receptor 4 (TLR4) and interleukin-17A (IL-17A) in well regulated and unregulated hypertensive patients. One of the objectives in our study was to evaluate if the type of the used anti-hypertension therapy could influence TLR4 expression or IL-17A concentration.

Design and Method: 105 hypertensive patients, without any other acute or chronic disease, have been involved, divided in two groups: 53 well regulated and 52 unregulated hypertensive patients. The patients had their IL-17A serum concentration determined with ELISA method and the TLR4 expression on peripheral monocytes applying flow cytometry.

Results: The expression of TLR4 was much lower in the group of well regulated patients who were prescribed beta blockers (18.9 vs. 22.6, $P=0.005$) and the concentration of IL-17A was significantly higher in the patients with diuretics, in both groups (for all patients 1.41 pg/ml vs. 2.01 pg/ml $P<0.001$, well regulated patients: 1.3 pg/ml vs. 1.8 pg/ml, $P=0.023$, unregulated patients: 1.6 pg/ml vs. 2.3 pg/ml, $P=0.001$). No significant differences were observed in TLR4 expression or IL-17A levels in the patients who received renin-angiotensin-aldosterone blockers (ACE inhibitors and AT1 receptor blockers) as part of their hypertension therapy.

Conclusion: The prescribed antihypertensive class has an immunomodulatory effect: diuretics are connected with higher IL-17A concentration and beta-blockers with lower TLR4 expression.

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