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Short communication

Anti-inflammatory effect of atorvastatin in patients with aortic sclerosis or mild aortic stenosis independent of hypercholesterolemia

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Abstract:
The aim of our study was to assess the effect of atorvastatin (20 mg) on inflammatory biomarkers in patients with aortic sclerosis or mild aortic stenosis. Additionally, the anti-inflammatory effect of statin therapy was compared between hypercholesterolemic and non-hypercholesterolemic patients.
We enrolled 33 patients with aortic sclerosis or mild aortic stenosis (AS) (18 males and 15 females, mean age 70 ± 8 years). Plasma levels of the following biomarkers were measured: C-reactive protein (CRP), interleukin (IL-6) and monocyte chemoattractant protein-1 (MCP-1). Atorvastatin (20 mg) was used for four weeks. All three biomarkers of inflammation significantly decreased after atorvastatin: CRP from 4.08 ± 3.72 to 2.97 ± 3.26 μg/ml ($p < 0.05$), IL-6 from 20.66 ± 20.05 to 13.36 ± 11.21 pg/ml ($p < 0.05$) and MCP-1 from 271.08 ± 85.72 to 213.24 ± 115.09 pg/ml ($p < 0.05$). No differences in the levels of these biomarkers were shown in a comparison between 17 patients with hypercholesterolemia and 16 patients without hypercholesterolemia.
In patients in the early stages of aortic valve disease (with aortic sclerosis or mild AS), atorvastatin at a dose of 20 mg reduced the biomarkers of inflammation.

Key words:
atorvastatin, inflammation, aortic sclerosis, biomarkers