LETTER TO EDITOR

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Pharmacological Factors that May Influence Myocardial Changes Associated with Atherosclerosis

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Sir,

We read with great interest the article recently published by Patel et al. entitled “Histological and Morphometric Analysis with Grading of Atherosclerosis-Associated Myocardial Changes in Cases of Sudden Death at a Tertiary Care Hospital”.[1] They found that a comprehensive evaluation combining histological grading and morphometric analysis is crucial for a thorough understanding of atherosclerosis-related myocardial changes. We congratulate them for their valuable contributions to the literature.

Drugs can significantly influence myocardial changes associated with atherosclerosis through various mechanisms, including lipid-lowering, immunomodulation, and targeted drug delivery. Statins, COX inhibitors, and bisphosphonates are among the drugs that have been studied for their effects on atherosclerosis and myocardial infarction. Each of these drugs interacts with the pathophysiological processes of atherosclerosis in unique ways.[2]

A plethora of studies have been conducted on the relationship between bisphosphonates, particularly alendronate, and myocardial infarction as well as atherosclerosis. Adherence to alendronate has been demonstrated to be a significant predictor of cardiovascular health outcomes.[3] Statins have been demonstrated to exert a pleiotropic effect on the human aorta, with a significant reduction in aortic intimal thickness and macrophage counts, thereby suggesting regression of atherosclerosis. In coronary arteries, statin therapy was associated with a decrease in high-grade plaque and an increase in fibrous plaque, suggesting increased plaque stabilization and reduced inflammation. [4,5] We believe that it would be appropriate for the authors to also address these factors associated with morphological change.

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