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Pathophysiology of the Peripheral Arterial Disease: Where Is the Paradox?

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Kucukseymen et al[1] consider some interesting points regarding inflammation, the atherosclerotic process, and arterial disease. They question which process comes first.

A number of observational and interventional studies have demonstrated the role of inflammation in peripheral arterial disease (PAD).[1,2] I agree with the suggestion that C-reactive protein (CRP) should be considered a useful marker of inflammation.[1] However, in patients screened for unrecognized PAD, we demonstrated high levels of chemokines and selectins, but they had a low level of transforming growth factor β-1.[3] We postulate a pivotal role of diverse mechanisms (pro-inflammatory and immunological) that play a role in the initiation and progression of PAD. Other studies[2] have demonstrated the association between increased circulating levels of several biomarkers with the presence of the PAD,[4] its severity,[5] and clinical outcomes.[6] Furthermore, studies have shown that therapeutic challenges (ie, propionyl-L-carnitine, sulodexide, and statins)[7-12] and physical training[13] are effective in reducing the circulating plasma levels of several inflammatory biomarkers.

In conclusion, it is important to consider CRP a marker of inflammation. On the other hand, we need to focus on several biomarkers[14] to elucidate the multiple facets of the inflammatory pathways.

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