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## Relationship between monocyte subsets, IL-6 and hs-CRP with the severity of coronary artery disease in stable Angina Pectoris patients

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**Background:** Monocytes are crucially involved in all stages of atherogenesis as cellular drivers of vascular inflammation hallmarking atherosclerotic disease. CD16<sup>+</sup> monocytes are pro-inflammatory cells, whose proportion is related to the occurrence of coronary artery disease (CAD), intamedia thickness and plaque stability. Interleukin-6 (IL-6) and highly sensitive C reactive protein (hs-CRP) were also closely related to atherosclerotic disease.

**Objective:** We investigated the relationship between the monocyte subsets, IL-6 and hs-CRP with the severity of CAD assessed by coronary angiography (CAG) in patients with stable angina pectoris (SAP) through their correlation with Gensini score.

**Methods:** Our study included 45 SAP patients who underwent diagnostic CAG. 32 patients of them who diagnosed as CAD were subdivided into 2 groups: 17 patients with multiple-vessel disease (MVD) and 15 patients with single-vessel disease (SVD). The rest 13 SAP patients without CAD (non-CAD) were considered as a comparative group. Gensini score was used to assess the severity of CAD. Monocyte subsets were analyzed by flow cytometry and serum levels of IL-6 and hs-CRP were measured by ELISA.

**Results:** The relative proportion of CD14<sup>+</sup> CD16<sup>+</sup> and CD14<sup>bright</sup> CD16<sup>+</sup> was significantly higher in CAD patients, MVD and SVD as compared with non-CAD patients and in MVD more than SVD. Serum levels of IL-6 and hs-CRP were significantly increased in CAD patients, MVD and SVD when compared with non-CAD patients, but no significant difference between MVD and SVD. The proportion of CD14<sup>+</sup> CD16<sup>+</sup> and CD14<sup>bright</sup> CD16<sup>+</sup> monocytes was positively correlated with Gensini score (r=0.667, P=0.000, r=0.695, P=0.000).

Conclusion: Elevated proportion of CD14<sup>+</sup> CD16<sup>+</sup> monocytes subsets was associated with the severity of CAD in patients with SAP.

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