

LETTER

Role of carotid ultrasonography in the evaluation of cardiovascular risk in patients with rheumatoid arthritis

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We read with great interest the article by Södergren and colleagues in a recent issue of *Arthritis Research & Therapy* ('Atherosclerosis in early rheumatoid arthritis: very early endothelial activation and rapid progression of intima media thickness') [1]. In the study reported in the article, the authors showed no differences of carotid artery intima-media thickness (IMT) in patients with very early rheumatoid arthritis (RA) compared with controls at baseline [1]. However, in the subgroup of individuals who were re-evaluated 18 months after the first ultrasound measurement, the carotid IMT had increased significantly among the patients with RA. However, this was not the case for the controls [1].

With respect to these interesting observations, we would like to further emphasize the importance of carotid ultrasonography in the evaluation of the cardiovascular risk of patients with RA and the importance of the duration of the disease as a predictor of severity, so it can influence the development of cardiovascular events in these patients. We previously reported that, in long-standing RA patients with no classic cardiovascular risk factors at the time of the carotid assessment, the duration of the disease was the best predictor of carotid plaques [2]. On the other hand, RA is a chronic inflammatory disease, and even in the apparently quiescent phases of the disease, the cumulative effect of the chronic inflammatory burden may account for the progression of the atherosclerosis disease. In this regard, we observed that the mean values of C-reactive protein (CRP) over an extended follow-up rather than a single determination of CRP at the time of the carotid ultrasonography

evaluation were associated with the carotid IMT [3]. Moreover, we found that carotid artery IMT had a high predictive power for the development of cardiovascular events over a 5-year follow-up period in 47 patients with RA without clinically evident cardiovascular disease at the time of the carotid ultrasonography evaluation [4]. In our study, carotid IMT categorized in quartiles was strongly associated with the development of cardiovascular events [4]. When logistic regression models were performed, carotid IMT at the time of the ultrasonographic study yielded a high predictive power for the development of cardiovascular events over the 5-year follow-up period. On the other hand, the duration of the disease is also considered an important risk factor of future cardiovascular events [5].

Taking all of these considerations together, we propose that ultrasonographic assessment of the carotid artery be performed on all patients with RA in order to establish a subgroup of patients with a high risk of cardiovascular complications. This procedure should be carried out at the time of the disease diagnosis and periodically thereafter, in particular in those patients with severe disease and persistent elevation of markers of inflammation.

Abbreviations

CRP, C-reactive protein; IMT, intima-media thickness; RA, rheumatoid arthritis.

Competing interests

The authors declare that they have no competing interests.

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