

Atherosclerosis and endothelial dysfunction in patients with ankylosing spondylitis

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Despite high cardiovascular mortality in AS patients it is extremely important to recognize early atherosclerosis and also to recognize if AS alone is an isolated risk factor to atherosclerosis. Few studies have investigated the prevalence of conventional risk factors in AS and the patient profile of those who are prone to atherosclerosis is not yet clear. Undoubtedly, studies involving tests of endothelial function together with structural measures are pivotal to evaluate the mechanisms, triggering, and progression of early arterial disease in autoimmune disorders such as RA, LES and AS. Some clinical results have revealed that intima-media thickness measured by high resolution ultrasonography appears to be limited as a marker of early atherosclerosis, particularly in young individuals with AS. With respect to biomarkers, the results of the published studies have in general, shown only mere associations. It is reasonable to assume that the true value of biomarkers will depend on further information regarding the quantitative relationship between endothelial dysfunction measures in AS patients and cardiovascular outcomes. Clearly, the study sample size, particularly those related to vascular dysfunction in an AS population, is also a limiting factor to a better understanding by scientific community of the possibility of endothelial activation by the disease itself.

It is known that patients with early AS will not perform well according to the modified New York criteria. This refers to the pivotal diagnostic criteria used to select AS patients for clinical studies, however, there is a lack of suitable criteria for early diagnosis. Consequently, utilizing modified New York criteria to detect early atherosclerosis or vascular dysfunction in AS patients would not be useful. Furthermore, the dependence on radiographic changes implies that many patients will still experience long delays before the diagnosis is made. A protocol in the early pre-clinical phase of endothelial dysfunction in AS or other spondylarthritides would indeed, result in better management and a greater benefit for the patient.

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