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An Analysis from the VITAL Registry on Autoimmune Rheumatic Diseases and Early Atherosclerotic Cardiovascular Disease

Adrian Linacre*

Department of Cardiovascular Surgery, University of Bio-Medico di Roma, Rome, Italy

Introduction

There is strong evidence linking autoimmune rheumatic disorders to atherosclerotic cardiovascular disease. This is related to aberrant vascular tone, upregulated oxidative stress, and increased expression of prothrombotic mediators, proinflammatory cytokines, and prothrombotic mediators in such patients. All vascular beds are affected by the formation and progression of atherosclerotic cardiovascular disease due to the biomechanistic involvement of rheumatic illness, in addition to conventional atherosclerosis risk factors such hypertension, hyperlipidemia, and diabetes mellitus. All patients with rheumatic diseases continue to be at increased risk for atherosclerotic cardiovascular disease, even though the progression of atherosclerotic cardiovascular disease in patients with rheumatic diseases is largely determined by factors like the extent, duration, and control of the disease process. Furthermore, patients with rheumatic disorders typically have higher cardiovascular morbidity and mortality compared to the general population with established risk factors for atherosclerotic cardiovascular disease [1].

Because of the ongoing rise in occurrence among young and middle-aged adults, atherosclerotic cardiovascular disease is no longer a condition that only affects the elderly. All of the major subtypes of atherosclerotic cardiovascular disease, including ischemic heart disease, ischemic cerebrovascular disease, and peripheral arterial disease, have shown this worrying tendency. Although the rising prevalence of traditional atherosclerotic risk factors like metabolic syndrome has been largely blamed for the rising incidence of premature atherosclerotic cardiovascular disease in young patients, the penetration of rheumatic diseases in this population has not been fully assessed [2].

Despite evidence suggesting that patients with rheumatic diseases have accelerated atherosclerosis, the majority of the data available today come from smaller-scale imaging-based observational studies, studies that are only concerned with one specific rheumatic or atherosclerotic cardiovascular disease, and studies that look at patients with nonpremature atherosclerotic cardiovascular disease. As a result, the main goal of our analysis was to conduct a comprehensive evaluation of the prevalence rates and associations with all major rheumatic diseases, such as systemic lupus erythematosus, rheumatoid arthritis, psoriatic arthritis, and ankylosing spondylitis, among patients with premature and extremely premature atherosclerotic cardiovascular disease [3].

Autoimmune Rheumatic Diseases (ARDs) With Onset in Childhood are Associated with Increased Risk of Atherosclerosis and CVD

Chronic inflammatory diseases like inflammatory arthritis enhance the risk of CVD and there is evidence of accelerated atherosclerosis. Traditional risk variables, such age, gender, smoking, or hypertension, may have a smaller or larger impact on the development of atherosclerosis in ARD patients. Pro-inflammatory cytokines' function in causing CVR is supported by data showing that reducing chronic inflammation linked to ARDs lowers the likelihood of developing atherosclerosis. It is also known that autoantibodies, which are frequently found in ARDs patients, may interfere with lipid metabolism and endothelial function, increasing CVR in ARDs. But there is currently little agreement on the precise mechanism underlying increased atherosclerosis in ARDs [4].

This is especially important for those with childhood-onset ARDs because they may have a longer time to live with the condition and may have been exposed to other harmful variables such as fluctuating chronic inflammation. Through arterial wall dynamic assessments and measurements of intima-media thickness (IMT), which have been shown to be altered in both children and adults with ARDs, endothelial dysfunction associated with systemic inflammation can be assessed as the first stage in the development of atherosclerosis.

Children with juvenile idiopathic arthritis (JIA) are more likely to smoke, have high blood pressure, and have a family history of cardiovascular disease, as well as have changes to their lipid profiles. Even if their arthritis is well-controlled with or without medication, young adults with JIA have subclinical atherosclerosis [4].

Discussion

In our national cohort of patients with atherosclerotic cardiovascular disease, we demonstrate that as compared to age-matched cohort of patients without atherosclerotic cardiovascular disease, patients with premature and extremely premature atherosclerotic cardiovascular disease had a higher prevalence of all rheumatic diseases. More importantly, our data demonstrates that after adjustment for traditional atherosclerotic cardiovascular risk factors [5].

***Address for Correspondence:** Adrian Linacre, Department of Cardiovascular Surgery, University of Bio-Medico di Roma, Rome, Italy, E-mail: linacrea@gmail.com*

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Conclusion

We showed that patients with premature and extremely premature atherosclerotic cardiovascular disease had higher rates of all rheumatic diseases than their age-matched counterparts without the condition, including systemic lupus erythematosus, rheumatoid arthritis, psoriatic arthritis, and ankylosing spondylitis.

References

1. Berenson, Gerald S., Sathanur R. Srinivasan, Weihang Bao, and William P. Newman, et al. "Association between multiple cardiovascular risk factors and atherosclerosis in children and young adults." N Engl J Med (1998) 338: 1650-1656.
2. McNamara, J. Judson, Mark A. Molot, John F. Stremple, and Robert T. Cutting. "Coronary artery disease in combat casualties in Vietnam." JAMA 216 (1971): 1185-1187.
3. Robinson, Jennifer G., Kevin Jon Williams, Samuel Gidding, and Jan Borén, et al. "Eradicating the burden of atherosclerotic cardiovascular disease by lowering apolipoprotein B lipoproteins earlier in life." J Am Heart Assoc 7 (2018): e009778.
4. McMahan, C. Alex, Samuel S. Gidding, Zahi A. Fayad, and Arthur W. Zieske, et al. "Risk scores predict atherosclerotic lesions in young people." Arch Intern Med 165 (2005): 883-890.
5. Enos, William F., Robert H. Holmes, and James Beyer. "Coronary disease among United States soldiers killed in action in Korea: preliminary report." J Am Med Assoc 152 (1953): 1090-1093.

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