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Re: 'Prothrombin G20210 Mutation and Lower Extremity Peripheral Arterial Disease: A Systematic Review and Meta-analysis'

Vasquez et al.[1] showed that prothrombin G20210 mutation is significantly elevated in patients with peripheral occlusive arterial disease (POAD) suffering from critical limb ischemia (CLI) but not in the others. Interestingly, this mutation has been reported to be more prevalent in patients with Buerger's disease.[2,3] Avcu et al.[2] found an increased frequency of the G20210 mutation in Buerger's disease (OR 7.98, 2.45—25.13). Buerger's disease is characterized by diffuse arterial thrombosis and a severe clinical picture, most often at the CLI stage. In a recently published case control study among patients with premature POAD the author's team found that G20210 mutation was significantly more frequent in Buerger's disease (4.2% vs. 1.7 in controls).[3] This difference was not found for atherosclerosis related POAD (2.6%). When compared with the 64 POAD patients, the 49 with Buerger's disease had CLI in 88% versus 28% in atherosclerosis related POAD. As suggested by Vasquez et al.,[1] G20210 mutation might be one among several factors favouring thrombosis and leading to CLI in POAD, and prospective cohort studies would be useful to evaluate the role of this mutation to predict progression in POAD.

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Response to 'Re: Prothrombin G20210A Mutation and Lower Extremity Peripheral Arterial Disease. A Systematic Review and Meta-analysis'

We read with interest the letter by Boulon et al.[1] The proposed association between prothrombin G20210A and thromboangiitis obliterans is very interesting. Prior studies have suggested that prothrombin G20210A interacts with other cardiovascular risk factors (especially smoking) to increase the risk of vascular events,[2] and this interaction could further explain the association of prothrombin G20210A and thromboangiitis obliterans seen by Bérard et al. and Avcu et al.[3,4] The literature search conducted in our systematic review did not identify the study by Bérard et al.[3,5]; had the study been included there would have been no changes in the association of lower extremity peripheral arterial disease (PAD) prothrombin G20210A (pooled random effect odds ratio 1.68 [95% confidence interval 0.94—3.00]; I^2 52.1%; $p = .08$). Furthermore, the addition of the study by Bérard et al. does not modify the association between prothrombin G20210A and critical limb ischemia secondary to PAD (even in the absence of positive cases).[3] Finally, we agree that well-designed prospective cohort studies are needed to evaluate the role of prothrombin G20210A in the progression and outcome of patients with PAD.

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