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# Genetic polymorphisms and retinal vein occlusion in an Italian population

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**ABSTRACT.** In this study, we assessed the prevalence of polymorphisms in genes involved in hyperhomocysteinemia or hemostasis to shed light on their role, if any, in retinal vein occlusion (RVO). We recruited 37 Italian patients (17 men and 20 women) with a diagnosis of central or branch RVO based on fundus examination and retinal fluorescein angiography, as well as 45 healthy controls. Risk factors and family history of RVO of all subjects were recorded. The distributions of polymorphisms in patients and controls were evaluated using the $\chi^2$ test and OR. We confirmed an increased risk in subjects with dyslipidemia (high density lipoprotein <59 mg/dL: 17.8% of controls, 43.2% of patients, P = 0.0002; low density lipoprotein >130 mg/dL: 26.7% controls, 54.1% patients, P = 0.0002), arterial hypertension (60% controls, 75.7% patients, P = 0.023), and high body mass index (28.9% controls, 70.3% patients, P < 0.0001, and excluded involvement of the selected polymorphisms in RVO. Overall, the tested polymorphisms did not appear to be useful for assessing predisposition or for the diagnosis and prognosis of RVO.

**Key words:** Retinal vein occlusion; RVO; Polymorphism; Thrombophilia

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