Dear Sir,

A mutation in the 3'-untranslated region of the prothrombin gene (the G to A mutation at nucleotide 20210) has been reported to be associated with an increase in the risk of venous thrombosis in Caucasians (1–5). The polymorphism is closely related to the prothrombin level, which in turn is associated with the risk of thrombosis (1). The prevalence of prothrombin 20210A mutation in Caucasians was shown to be present in 5–6% in unscreened subjects with a history of venous thrombosis and 17–19% in venous thrombophilia (1–5), and 1–2% in control subjects (1, 3–5). As far as we know, there was no report of prothrombin 20210A mutation within the Chinese population. Because there exists some racial difference in the incidence of factor V Leiden mutation between Caucasians and oriental populations (6–8), and no factor V Leiden mutation was found in Chinese venous thrombophilia (7), we aimed to determine the frequency of prothrombin 20210A in venous thromboepilic patients and healthy individuals in Taiwanese Chinese.

We have examined the prothrombin dimorphism among 111 verified Chinese venous thromboepilic patients composed of 55 males and 56 females, aged 47.4 ± 17.6 (Mean ± SD) years, at National Taiwan University Hospital, and 149 apparently healthy and age-matched individuals composed of 78 males and 71 females, aged 43.9 ± 14.6 years (p = 0.08) without any history of venous thrombosis. The criteria of thrombophilia were defined according to our previous study (7). We didn’t find any heterozygote (G/A) or homozygote (A/A) at position 20210 in venous thromboepilic patients and healthy individuals, i.e., the prevalence of the 3'-untranslated region of prothrombin mutation was 0% in 260 cases in our study.

The genotype G/G was confirmed by an automated fluorescence-based DNA sequence analysis of the amplified genomic DNA.

Prothrombin 20210A mutation might be extremely rare in Taiwanese Chinese. We concluded that prothrombin 20210 mutation was not an important cause of venous thrombophilia in Chinese similar to what has been reported with factor V Leiden mutation in Chinese. These unique findings might further explain that racial background plays a major role in the causes of inherited thrombophilia between Chinese and Caucasians.

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