

The frequency of factor V G1691A (Leiden) mutation in the healthy Kazakh population

Sağlıklı Kazak popülasyonunda faktör V G1691A (Leiden) mutasyon sıklığı

Hakkı Taştan

Department of Biology, Faculty of Science, Gazi University, Ankara, Turkey

To the Editor,

Factor V G1691A (Leiden) (FVL) is an autosomal dominant mutation that causes activated protein C (APC) resistance, which results in hypercoagulation disorders [1]. The mutation is unevenly distributed, ranging from non-existent in Africa, America, Asia, and Australia, to an incidence as high as 15% in some regions of Europe [2,3].

Kazakhs emerged as a unique ethno-linguistic group during the 13th century AD [4], after invading the region that is now modern Kazakhstan. At that time, many tribes of Turkish and Mongolian origin inhabited the region [4,5]. The Kazakh ethnic identity, which was distinguishable by its distinctive Kipchak Turkish dialect, emerged in this complex sociocultural environment [4]; however, the Kazakhs did not form a unified Khanate like other Turkish-speaking groups. Instead, during the 15th and 16th centuries they subdivided into 3 major tribal confederations: the Greater, Middle, and Lesser (Hordes) [4,6]. This division likely occurred via already existing tribal lines, and marked a political, as well as geographical split.

The frequency of FVL in Europe is 3%-10%. It is rare in East and Southeast Asia, occurs with a 12%

frequency in such neighboring countries as Azerbaijan and Kyrgyzstan [7-9], and has a frequency of 3.1% in western Iran [10]. The best of my knowledge the frequency of FVL in the Kazakh population has not been reported. The present study included 69 healthy Kazakh individuals. All the participants provided informed consent. Blood samples were collected into EDTA-containing tubes and then DNA was extracted from peripheral blood leukocytes. FVL analysis was performed via real-time PCR (RT-PCR), as previously described [11]. In all, 3 (4.3%) of the 69 participants were heterozygous for FVL and the frequency of FVL was 0.02% among the Kazakh population. The data obtained show that the frequency of FVL in Kazakhs is similar to that in the general Caucasian population.

Conflict of interest statement

The authors of this paper have no conflicts of interest, including specific financial interests, relationships, and/or affiliations relevant to the subject matter or materials included.

Acknowledgement

I am grateful to Professor Nejat Akar, MD and Yonca Eğin for analyzing the samples.

Address for Correspondence: Assoc. Prof. Hakkı Taştan, Department of Biology, Faculty of Science, Gazi University, Ankara, Turkey
Phone: +90 312 202 13 98 E-mail: hakkitastan@gazi.edu.tr

doi:10.5152/tjh.2011.96

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