

THE IMPACT OF *PER3* VNTR POLYMORPHISM ON THE DEVELOPMENT OF SCHIZOPHRENIA IN A TURKISH POPULATION

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Up to 80 % of patients who suffer from schizophrenia have sleep impairments, which affect physical and mental health, as well as quality of life. Several tandem repeat polymorphisms (VNTRs) in the Period 3 (Per3) gene have been associated with heritable sleep and circadian variables. The purpose of this study is to investigate the relationship between the VNTR variant of the PER3 gene and genetic predisposition of schizophrenia in a Turkish population. Blood samples were taken from 100 patients with schizophrenia, and from 100 normal controls who are age and sex-matched. PER3 genotyping was performed on DNA by polymerase chain reaction (PCR) using specific primers. For the PER3 VNTR polymorphism, we found no significant differences in the genotype distribution and allele frequency, between the schizophrenia and control groups. No association was noted between clinical and demographical characteristics of schizophrenia patients and the PER3 VNTR genotype distribution. This is the first study investigating association of the PER3 VNTR polymorphism with schizophrenia in a Turkish population. In conclusion, the results of this study do not support an association between the PER3 VNTR polymorphism and risk of schizophrenia in a Turkish population.

Key words: Schizophrenia, Period 3, gene, polymorphism, PCR, VNTR.

ВПЛИВ ПОЛІМОРФІЗМУ (VNTR) ГЕНА *PER3* НА РОЗВИТОК ШИЗОФРЕНІЇ У НАСЕЛЕННЯ ТУРЕЧЧИНИ

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Близько 80 % пацієнтів, які страждають від шизофренії, мають порушення сну, що впливає на фізичне та психічне здоров'я, а також погіршує якість життя. Деякі поліморфізми тандемних повторів (VNTRs) у гені Period 3 (Per3) пов'язують з успадкованими змінними показниками сну і циркадного ритму. Мета цього дослідження полягала у вивченні зв'язку між VNTR варіантом гену *PER3* і генетичною схильністю до шизофренії у населення Туреччини. Зразки крові взяли у 100 пацієнтів з шизофренією і у 100 здорових осіб контрольної групи, які мали подібні стать і вік. *PER3* генотипування проводили на ДНК за допомогою полімеразно-ланцюгової реакції (ПЛР) за використання специфічних праймерів. Ми не знайшли суттєвих відмінностей між групами пацієнтів з шизофренією і здорових осіб у розподілі генотипу і частоті алелів щодо VNTR поліморфізму гену *PER3*. Не було зафіксовано жодного зв'язку між клінічними і демографічними характеристиками пацієнтів з шизофренією і розподілом генотипу *PER3 VNTR*. Це перше дослідження можливого зв'язку між поліморфізмом *PER3 VNTR* та шизофренією у населення Туреччини. Результати цього дослідження не підтвердили наявності зв'язку між поліморфізмом *PER3 VNTR* та ризиком виникнення шизофренії у населення Туреччини.

Ключові слова: шизофренія, Period 3, ген, поліморфізм, ПЛР, VNTR.

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Received October 04, 2019
 Received February 18, 2020
 Accepted March 18, 2021