

Temperament and Character Traits in Patients With Epilepsy

Epileptic Personality

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Abstract: Personality and behavioral changes in epilepsy are well documented. However, neither the quantitative characteristics nor the etiology of these changes is clear yet. Cloninger has developed a psychobiological personality model that provides a way to evaluate personality in a dimensional way. This study examined the relationship between epilepsy and Cloninger's dimensional psychobiological personality model. A total of 73 epilepsy outpatients and 79 healthy controls were examined using the Structured Clinical Interview for *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, Axis I Disorders, the Turkish version of the Temperament and Character Inventory, and an epilepsy questionnaire. Epilepsy patients had higher harm avoidance (HA) and lower persistence, self-directedness (SD), and cooperativeness scores than healthy controls did. In epileptic subjects, there was no correlation between age and duration of epilepsy. Subjects with partial seizures had higher HA scores and lower SD scores than generalized ones. Comorbid depression was represented with lower SD scores. In multiple linear regression models, only major depressive disorder predicted lower scores of SD. This study confirms specific personality changes among epileptics according to Cloninger's dimensional personality model and indicates a relationship between the characteristics of epilepsy and psychiatric comorbidity.

Key Words: Epilepsy, temperament, personality

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Personality is the sum of the physical, social, emotional, and mental properties of individuals (Sadock and Sadock, 2004). Personality can also be described as the sum of personal understanding, intelligence, decision making, and behavioral characteristics that develop at a young age through the interaction of nature (occurring at birth), nurture (obtained by treatment, training, cultivation, etc.), and culture (obtained by social and environmental influences) factors and is quite resistant to alterations. Although there are many personality tests, the Temperament and Character Inventory (TCI), which was developed by Cloninger, differs from others because it provides a biological model in addition to a descriptive model. This model of personality provides a profile of four dimensions of temperament and three dimensions of character (Cloninger et al., 1993). In recent studies, the genetic, biological, and social aspects of these “temperament and character” traits

have been studied in detail, and data supporting this model have been obtained (Cloninger et al., 1993; Kose et al., 2009; Nery et al., 2009).

Some brain disorders can lead to personality impairments that are related to disease pathology and/or the harmful effects of disease. One of these is epilepsy, in which we can frequently see personality disorders. Epilepsy is a common chronic neurological disorder characterized by seizures and can lead to structural and neurochemical alterations in the brain. In epileptic patients, factors resulting in epilepsy and recurrent seizures and also neurobiological parameters occurring after epilepsy treatment can affect the neural circuits mediating personality (Brandt et al., 1985). Epileptic personality, which occurs in patients with epilepsy seizures, has been known for a long time and has been described with subjective properties such as “egocentricity and impulsivity” (Bear et al., 1989).

This study aimed to investigate the temperament and character traits of epilepsy patients through a dimensional and topical approach. Furthermore, the sociodemographic data related to these traits and their correlation to the clinical properties of epilepsy have been investigated. Thus, this study may contribute to the mutual etiology, diagnosis, treatment, and prognosis process of epilepsy and its effects on personality.

METHODS

Patients

This study included epilepsy patients at Atatürk University Hospital, an epilepsy polyclinic, who agreed to participate in this study and signed a written consent form. The patients who were not disqualified by the exclusion criteria were consequently selected. Healthy volunteers, who were matched by age and sex and had no neurological or chronic diseases, constituted the control group. A total of 152 people, 73 of them with epilepsy (36 men and 37 women) and 79 in the control group (43 men and 36 women), were included in this study. This study was approved by the local ethics committee of Atatürk University, Faculty of Medicine, and Health Science Institute.

First, a psychiatric interview was performed with both epilepsy patients and the control group. This interview was conducted using the *Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (SCID-I). Then, a TCI form and a survey form including the sociodemographic data and clinical characteristics of the patients were administered. In the epilepsy group, 15- to 65-year-old literate patients with an epilepsy diagnosis for more than 6 months were selected. In accordance to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*, patients with certain disorders that would limit their responses to the scales were disqualified. These included patients with mental retardation, dementia, and others; patients with organic disorders that directly interact with epilepsy and the patient's personality (e.g., tumor on frontal lobe); and patients with alcohol and/or drug addiction. In addition, the following materials were used to obtain data from patients.

Epilepsy Information Form

The form included questions requesting the patient's sex, age, marital status, education level, place of residence, age at first epileptic

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A preliminary form of this study was previously presented as poster presentation in EPA-2010 in Munich, Germany.

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