

Dermatoglyphic characteristics in panic disorder

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Abstract

Objectives: Panic disorder is one of the most common anxiety disorders. There are various etiological factors in panic disorder. *Dermatoglyphics* are special patterns formed by epidermal ridges in fingertips, palms and soles. They form during the intrauterine period and remain unchanged throughout life. Genetic diseases can change the form and structure of *dermatoglyphics*. The aim of this study was to evaluate fingertip and palmar *dermatoglyphic* samples of panic disorder patients and to compare these with the control group.

Materials and methods: *Dermatoglyphic* data was collected from 50 patients diagnosed with panic disorder according to DSM-IV diagnostic criteria and from a control group consisting of 50 healthy people. Data was collected using a digital scanner and was transferred to computer medium. Using the Image J program, atd, dat, adt angles, a-b ridge counts, sample types of all fingers and ridge counts were calculated. Data was analyzed using t-test, Mann Whitney U and chi-square tests.

Findings: It was found that the a-b ridge count in both hands and the ridge count in the thumbs of panic disorder patients were significantly higher those of the control group. It was found that, in the right hands of panic disorder patients, there was a significant increase in ridge counts in the ring finger, total ridge count and adt angle when compared to the control group. However, there was no significant difference between the groups in terms of dermal ridges, and the most common characteristic in both groups was ulnar loops.

Results: Analyzing *dermatoglyphics* is non-invasive, straightforward, quick and economical. The

use of *dermatoglyphics* can facilitate identification and early diagnosis of those at risk of panic disorder, allowing preventive measures to be taken.

Key words: Dermatoglyphics, Panic Disorder, Etiology, Genetic Tendency

Introduction

Panic disorder (PD) is a chronic anxiety disorder, characterized by panic attacks, physiological signs of anxiety and anticipatory anxiety. The prevalence of panic disorder within society is 1.5-4.8% and the female/male ratio is 2.^{1,2} PD can occur due to genetic, petrochemical, neurophysiological, psychological and environmental factors. The prevalence of PD in first degree relatives of PD patients is 3-17 times higher than in the first-degree relatives of healthy people.³⁻⁵ Studies carried out on twins indicated that, in monozygotic twins, the concordance ratio is 2-3 times higher than in dizygotic twins (11%-24%).^{4,6} Previous studies have suggested that, in PD, sensitivity to panic is inherited, rather than the PD itself.⁷

The nervous system centers which cause PD have not yet been accurately identified.^{8,9} Gorman et al. reported that panic attacks can result from a pathology in the cerebral peduncle; while agoraphobia can result from a situation in the frontal lobe cortex.¹⁰ The central nervous system is probably affected prior to week 30 of intrauterine life, during the period when dermatoglyphic samples are formed.¹¹

Dermatoglyphics are special patterns formed by epidermal ridges in fingertips, palms and soles. They form between 11-24 weeks of intrauterine