## MORPHOLOGIC-VOLUMETRIC ALTERATIONS IN BRAIN STRUCTURES RELATED WITH PSYCHOTIC DISORDERS INCLUDING SCHIZOPHRENIA, SCHIZOAFFECTIVE DISORDER AND PSYCHOTIC BIPOLAR DISORDER IN THE SAME STUDY FROM MRI



M.B. ÖZDEMIR, MD PhD, Professor<sup>1</sup> Pamukkale University, Medical Pamukkale University, Medical Faculty, Department of Anatomi



N. KARAGENÇ, MD Ph Assistant Professor, Faculty, Department of Medical Biology



A. AYDIN, PhD, Professor<sup>2</sup> Pamukkale University FAculty of Engineering, Department of Geophysics

<sup>1</sup>Pamukkale University, Medical Faculty, Anatomy Dept, Denizli, Türkiye <sup>2</sup>Pamukkale University, Engineering Faculty, Denizli, Türkiye E-mail: nkaragenc@hotmail.com

Key words: anatomy, brain, morphometry, psychotic disorder, schizophrenia schizoaffecti disorder, psychotic bipolar disorder.

Objective: It has already been investigated that schizophrenia (SZ), schizoaffective disorder (SZA) and psychotic bipolar disorder (BD) cause volumetric alteration on brain structures previously. However, these are in separated studies from each other and have some contradictions in findings. The aim of present study is to estimate volume of the brain structures in the same study in order to improve understanding of morphologic abnormalities in underlined psychotic disorder.

Methods: For this purpose, brain structures from MR images of the 174 cases with psychotic disorder (58 female and 116 male) were compared with 186 healthy controls (67 female and 119 male). 16 right, 16 left and 11common, totally 43 structures that might be related with psychotic disorders was evaluated.

Results: There was a volume decreasing in almost all structures in patient with SZ. But, ventricles volume increased in patient with all SZ, BD and SZA. Most of the alterations was correlated with Positive and Negative Syndrome Scale (PANNS).

Conclusion: Then we concluded that the effect of the psychotic disorders were definetely different on sexes. Volumetric alterations were descriptive mostly for patients with SZ. BD and SZ might overlap in clinical and biological features but they demonstrated significantly different alterations morphologically. PANNS was more correlated with SZ, especially with SZA than BD via morphometry. Morphemetric abnormality was less in BP than SZ and SZA. These findings indicate the availability of anatomical markers in the diagnosis and treatment of psychotic patients.