



Psychiatry & Behavioral Science Section – 2010

I17 Genetics and Suicide: Gene GABAA Gamma 2

Duarte N. Vieira, PhD, National Institute of Legal Medicine, Largo da Sé Nova, 3000-213 Coimbra, 3000-213, PORTUGAL*

By attending this presentation, attendees will learn how polymorphisms in the gabaergic system, namely GABAA gamma 2, do not appear to be correlated with completed suicide.

This presentation will impact the forensic science community by identifying genes that may predispose Portuguese individuals to completed suicide.

Every year worldwide, one million people commit suicide and at least ten million more attempt suicide. Epidemiological studies suggest that suicide attempts and completed suicides have a genetic component. These phenomena may share a common genetic underpinning which is independent of the genetic transmission of other psychiatric disorders or symptoms that are causative of or comorbid with suicidal behavior (e.g., Major Depressive Disorder). Alterations in gabaergic neurotransmission and GABA receptors long have been postulated to play a critical role in the etiology of completed suicide. Therefore, we investigated the potential association between the GABAA gamma 2 gene and suicide.

Peripheral blood was collected from alcoholics and controls. Genomic DNA was extracted from blood lymphocytes using a standard method. The polymorphism of the GABAA gamma gene was investigated by RFLP-PCR. There was no statistical difference in the allelic and genotypic frequency of the polymorphism of GABAA gamma 2 in individuals who committed suicide. In conclusion, no evidence was found for an association between the GABAA gamma 2 gene and completed suicide in this sample.

Suicide, Genetics, Gabaergic System