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COMMENT & CRITIQUE

Lack of association between polymorphism -592A/C in the promoter region of *IL10* gene and obsessive-compulsive disorder in Chinese Han population

Obsessive-compulsive disorder (OCD) is a debilitating and chronic neuropsychiatric disorder with prevalence rates estimated to be as high as 0.13% in Mainland China (1), characterised by the presence of symptoms such as intrusive, unwanted thoughts and ideas that cause an increased amount of anxiety and intentional, repetitive behaviours (2). Evidence suggests that immune deficiency may be directly implicated in the pathophysiology of OCD, based on its symptomatic overlap with depression and schizophrenia and based on disturbances at the level of the hypothalamic-pituitary-adrenal axis (3,4). As an important immunoregulatory cytokine and Th2 cell cytokine, interleukin 10 (*IL10*) is produced by lymphoid cells and exerts its functions by the inhibition of macrophage/monocyte and T-cell lymphocyte replication and the secretion of inflammatory cytokines, such as IL12, tumour necrosis factor (TNF)-α and IL8. Although *IL10*, located on chromosome 1q31–32, was previously reported to be linked to the development of multiple diseases, such as depressed mood (5) and schizophrenia (6) in genetic studies, the literature regarding the association between *IL10* polymorphism and OCD remains poorly understood. To identify the association of -592A/C polymorphism in *IL10* with susceptibility to OCD in a Chinese Han population, we recruited 181 OCD patients and 285 OCD-free controls from the Affiliated Hospital of Medical College, Qingdao University. Participants were comprised of 69 female and 112 male outpatients, aged between 10 and 70 years old, who were diagnosed with OCD fulfilling DSM-IV criteria, based on the Mini International Neuropsychiatric Interview (MINI) (7). Informed consent was obtained from all the subjects and the study was approved by the Medical Ethical Review Committee of theAffiliated Hospital of Medical College, Qingdao University. We analysed genetic distribution of allele and genotype of *IL10* -592A/C by performing polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP). Our results showed that there was no association between the genotypic frequencies and OCD ($x^2 = 1.174$, df = 2, $p = 0.556$) or between the allelic frequencies of *IL10* -592A/C and OCD [$x^2 = 0.286$, df = 1, $p = 0.593$, odds ratio (OR) = 1.078, 95% confidence interval (CI) = 0.819–1.417]. Lack of significant difference in the clinical presentation was indicated between the two cohorts considering sex, clinical stage of onset, characteristic of symptom and clinical classification (DSM-IV) associated with OCD. In conclusion, there was a lack of association between OCD and *IL10* -592A/C polymorphism in this Chinese Han population. The present study suggests that polymorphism at position -592 in *IL10* does not confer susceptibility to OCD at least in this Chinese Han population. One main factor may have contributed to these negative findings, which is that only one polymorphism site (at position -592 of *IL10*) was examined. Further investigations are needed to confirm these findings.

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