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**Pharmacogenetic study of antipsychotic induced side effects in chinese han population****Weihua Yue***Peking University Sixth Hospital, China*

**Statement of the Problem:** Significant differences exist in the therapeutic outcomes of different types of antipsychotic medications (APDs) in schizophrenia (SCZ). To provide evidence supporting personalized treatment for schizophrenia of Chinese Han population.

**Methodology & Theoretical Orientation:** Two-stage pharmacogenetic study included the Chinese Antipsychotics Pharmacogenomics Consortium (CAPOC) of 3,030 Chinese Han SCZ patients treated with 7 APDs followed-up 6 weeks, an independent validation sample of 1,395 Chinese Han patients with SCZ, as well as cross-ethnicity validation sample included 766 patients with SCZ from CATIE. To compare therapeutic outcomes among different APDs, Therapeutic Outcomes Wide Association Scan (TOWAS) was proposed. GWASs were conducted on common side-effects of APDs, including weight gain, QTc interval prolongation, hyperpro-lactinemia (HPRL), and movement disorders, to explore the genetic factors contributing to side-effects of APDs. Finally, the application of personalized treatment with APDs was investigated in real-world settings to elucidate its advantages. Findings: Through the TOWAS, we observed that the differences in therapeutic outcomes among different APDs primarily manifest in terms of side-effects, with no significant distinctions in symptom improvement. We identified a specific biotype, namely AIWG+TR biotype, characterized by distinct clinical and genetic features. We identified two risk genes for APD-induced QTc interval changes in the Chinese Han population (ATAD3B and SKIL), one risk gene for APD-induced HPRL (ITIH2), one risk gene for APD-induced EPS (RAB44), etc. Conclusion & Significance: This study contributes genetic evidence of common side-effects of APDs in the Chinese Han population.

**Biography**

Weihua Yue is Deputy Director of the Institute of Mental Health, Sixth Hospital, Peking University. She got her medical degree in 2003 from Central South University, China. Now she is a Professor of Psychiatry at, the Institute of Mental Health, Peking University. She was supported by the National Nature Science Foundation of China (NSFC) for Distinguished Young Scholars in 2018. She also works as the editor of Biological Psychiatry, Frontiers in Psychiatry, and so on. She majors in the molecular genetics of common mental disorders (schizophrenia, autism, major depressive disorders, etc.). Professor Yue has co-authored more than 100 original articles in peer-reviewed journals, such as Nature Genetics, Lancet Psychiatry, Molecular Psychiatry, Cell Discovery, etc.