

Psychiatric Services in Patients with Bipolar Disorder Before and After Traditional Chinese Medicine Intervention: A population-based study in Taiwan

SHU-PING CHEN¹, SU-TSO YANG^{2,3}, KAI-CHIEH HU^{4,5}, KUAN-PIN SU^{6,7}

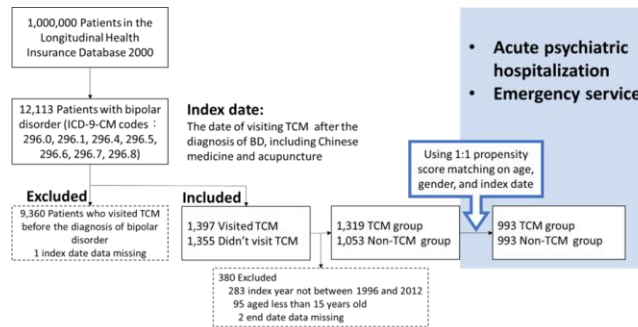
¹Graduate Institute of Chinese Medical Science, China Medical University, Taichung, Taiwan, ²School of Chinese Medicine, College of Chinese Medicine, China Medical University, Taichung, Taiwan, ³Department of Imaging Diagnosis, China Medical University Hospital, Taichung, Taiwan, ⁴Management office for Health Data, China Medical University Hospital, Taichung, Taiwan, ⁵College of Medicine, China Medical University, Taichung, Taiwan, ⁶Department of Psychiatry and Mind-Body Interface Laboratory (MBI-Lab), ⁷An-Nan Hospital, China Medical University, Tainan, Taiwan

Objective

Patients with bipolar disorder (BD) seek traditional Chinese Medicine (TCM) for unmet clinical needs with psychotropic medications. However, the clinical characteristics of practices and outcomes of TCM in BD are not fully understood. We aimed to investigate the prescription patterns, the number of visiting emergency services (ES), acute psychiatric hospitalizations (APH), and the length of stay (LOS) days with and without TCM treatments.

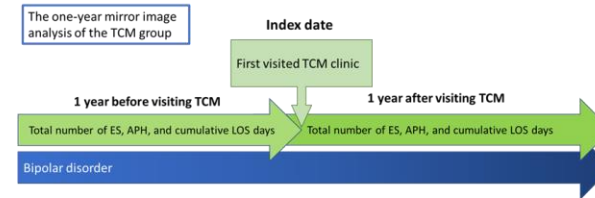
Methods

BD patients were withdrawn from Taiwan's longitudinal health insurance database 2000 (LHID 2000). The date of receiving TCM after the diagnosis of BD was defined as the index date. Patients who used TCM were in the TCM group, while those who never used TCM were in the non-TCM group. The one-to-one propensity score matching age, gender, and the index date was used to assess the characteristics of patients needing APH. The one-year mirror image analysis was used to compare the differences in psychiatric services before and after TCM interventions in the TCM group. This study was approved by the Research Ethics Committee of China Medical University and Hospital [CMUH104-REC2-115(AR-4)], Taichung, Taiwan.



Results

The number of patients in the TCM and non-TCM group were both 993. Male patients (adjusted hazard ratio, aHR = 1.27, 95% CI = [1.06, 1.53]), alcohol use disorder (aHR = 1.93, 95% CI = [1.42, 2.62]), and mood stabilizers usage such as lithium carbonate (aHR = 2.31, 95% CI = [1.90, 2.79]), carbamazepine (aHR = 1.88, 95% CI = [1.53, 2.31]), or valproic acid (aHR = 1.28, 95% CI = [1.04, 1.58]) had higher risk of APH. The number of APH patients (27.79% vs. 27.59%, $p=0.9201$), number of APH ($p=0.0731$), and cumulative LOS after logistic regression analyses had no differences between the TCM and non-TCM groups. Comparisons of incidence of APH between the TCM and non-TCM groups in different stratifications revealed that the usage of mood stabilizers had statistical differences.

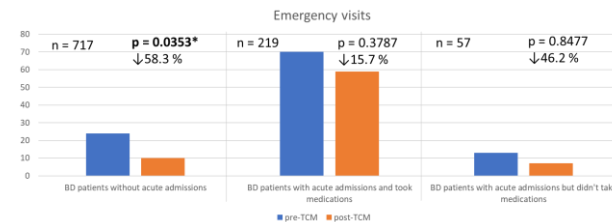


Abbreviations: APH, acute psychiatric hospitalization; ES, emergency service; LOS, length of stay; TCM, traditional Chinese medicine

In the TCM group, seven hundred-seventeen patients didn't have APH records, and their total ES times decreased 58.3% after TCM intervention (24 vs. 10, $p=0.0353$). Two hundred seventy-six patients had APH records. Among them, 219 patients took mood stabilizers, and their ES times decreased 15.7% (70 vs. 59, $p=0.3787$), total number of APH increased by 3.8% (156 vs. 162, $p=0.7945$), and cumulative LOS increased by 10.8% (3,442 vs. 3,814, $p=0.5347$) after TCM intervention; 57 patients didn't take mood stabilizers, and their ES times decreased 46.2% (13 vs. 7, $p=0.8477$), the total number of APH (16 vs. 38, $p=0.025$) and cumulative LOS (403 vs. 904, $p=0.0020$) significantly increased after TCM intervention.

Discussion

Bipolar disorder is a progressive disease. Patients with more severe illnesses of BD tended to receive TCM treatment. The results interpret that patients with BD who need inpatient care still have to take mood stabilizers. Although additional TCM treatments wouldn't increase the risk of acute admission of BD, it seems impossible for patients with BD who hope to improve their disease only by TCM treatments.



Conclusion

There were no differences in APH with or without TCM intervention. TCM decreased the times of ES, especially for those who were without APH. More studies are needed in other real-world settings to generalize our results.