Chinese Herbal Supplement Provides Relief of Concussion Symptoms Following Mild Traumatic Brain Injury

Marked improvements in post-concussion symptoms, quality of life, anxiety, and depression reported in a Phase III double-blind, placebo-controlled, randomized trial.

by Cliff Dominy PhD

A Russian multi-center Phase III clinical trial has reported that the herbal supplement MLC901 (NeuroAiD™II) leads to statistically significant improvements in quality of life, anxiety, and depression scores in adults with concussion following a mild traumatic brain injury (TBI).

MLC901 is an extract of the roots, rhizomes and seeds of nine traditional plants used in Chinese medicine. While the supplement did not improve concentration span, the secondary benefits offer a potential role for MLC901 in improving the quality of life for people with this chronic injury.

The SAMURAI study, which concluded in April 2022, looked at the efficacy of MLC901 in treating cognitive impairment. Valery L. Feigin from the Auckland University of Technology was the senior investigator for the study. Feigin wanted to determine if a six-month treatment of MLC901 could improve cognitive functioning in adults with post-concussion syndrome compared to a placebo.

The primary outcome of the trial was complex attention as measured by the Central Nervous System Vital Signs tool (CNS-VS) - a suite of neurological tests which the researchers tailored to specifically assess attention span.

One hundred and eighty two participants, recently diagnosed with post-concussion syndrome, were enrolled in the trial. They were aged between 18 and 65 years and experiencing cognitive impairment.

Patients were excluded if they had severe co-morbidities, were participating in another clinical trial, or were pregnant. They were randomly assigned (1:1) to receive MLC901 (two 0.4g capsules) or a placebo three times per day for six months and assessed at 3 monthly intervals.

In addition to the primary outcome of complex attention, the secondary outcomes of the trial included questionnaires on concussion symptoms, as well as quality of life metrics and anxiety/depression scores.

The results failed to show a statistically significant improvement in complex attention as measured using CNS-VS ($p=0.58$), however the supplement group showed statistically significant improvements ($p<0.05$) in symptoms, quality of life and depression scores compared to placebo. These findings became evident within 3 months of the trial start and were observed beyond the duration of the study. There were no serious adverse events reported.

Researchers noted that a limitation of the study might be that the CNS-VS tool is too robust to detect subtle changes in cognition after a mild TBI. Additionally, the CNS-VS tool is relatively unused in Russia and might need to be adapted to better suit the cultural context where it is deployed.

These nuances might be of little importance to someone with cognitive difficulties from a traumatic brain injury. The good news for sufferers is that MLC901 is safe to use and effective at improving a number of quality of life metrics for this chronic injury.

Reference

Pilipenko PI, Ivanova AA, Kotsiubinskaya YV, et al. A double-blind, placebo-controlled, randomized, multi-centre, phase III study of MLC901 (NeuroAiDTMII) for the treatment of cognitive impairment after mild traumatic brain injury. *PLoS One*. 2025;20(7):e0310229.