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Abstract

Preliminary study on the effect of Japanese Kampo health food containing Panax Pseudoginseng and Eucommia on cognitive function.

Objective

We have noticed that protecting liver function has a significant impact on brain activity, and we are studying the possibility of Kampo health food for the prevention and treatment of dementia. So far, Kampo health foods containing Panax Pseudoginseng and Eucommia Ulmoides have not only improved liver function, but also have significant effects on the performance of neuro outgrowth, including the extension of neurites. This study is a preliminary test to observe the changes in blood levels of amyloid β and amyloid β excretion-related proteins after 8 weeks of healthy volunteers eating Kampo health food **Brainwell** (BW).

Method

Three subjects need to consume BW continuously for 8 weeks, which 2 subjects take 1g per day while the remaining subject takes 3g per day. The subjects are required to take blood sample before the test, 4 weeks after taking BW and also 8 weeks after. During each blood collection, in addition to general blood test, several components are measured, including the concentration of amyloid β peptide ($A\beta$ 1-42, $A\beta$ 1-40) in plasma, serum β amyloid secretion-related protein (ApoA1), three components of complement (C3) and thyroxine delivery The protein (TTR). The changes of each concentration are observed.

Result

Liver function is based on AST and ALT index. Taking the subject who took a high dose (3g per day) as an example, the AST index dropped from 42IU/L to 20IU/L, which decreases 52%. The ALT index dropped from 42IU/L to 26IU/L, a significant drop in 43%. The two lower dosage subjects (1g per day) showed almost no change in the value after taking it for 4 and 8 weeks, and the value was low and stable. Studies have confirmed that the effect is significant after taking BW for 4 weeks. Taking BW within 8 weeks will not change the level of amyloid beta in the blood. ApoA1 and TTR, amyloid

β excretion-related protein's concentration tend to increase. There were no major changes in eGFR and BUN, which are indicators of renal function.

Discussion

To conclude, the consumption of BW can help improve liver function and prevent the possibility of cognitive function deterioration based on the changes in the concentration of amyloid β and amyloid β excretion-related proteins. In the future, it is necessary to increase the number of subject and conduct more detailed research, such as cognitive function testing after consuming BW.