

Randomised Double-blind Placebo-Controlled Multicentre Trial for the Effects of Yokukansan in Smokers with Depressive Tendencies

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Background: Smoking and depression are closely related and form a vicious cycle. Yokukansan has the effect of calming neuropsychiatric symptoms such as anger and irritation. We examined the efficacy of Yokukansan during smoking cessation (SC) therapy in smokers with depressive tendencies.

Methods: A multicentre, double-blind, randomised, placebo-controlled, parallel-group comparison trial was conducted between 2016–2020 at 12 centres of the National Hospital Organization, Japan. This trial targeted smokers who first visited the SC outpatient clinics, did not receive any pharmacological treatment, and scored 39 or more on the self-rating depression scale (SDS). Participants (n=198) were randomly assigned to Yokukansan or placebo groups. The trial drug continued for 12 weeks from the start of the SC treatment. We examined the success rate of the SC treatment, SDS score and the Profile of Mood States (POMS).

Results: The success rate of SC was similar between groups (yokukansan 67%; placebo 63%). Scores on SDS and tension-anxiety POMS subscale showed significant and similar improvement in both groups after SC. However, depression-dejection POMS subscale score improved in the yokukansan (before: 4.4 ± 4.2 , after: 2.6 ± 3.2 , $p=0.003$) but not in the placebo group (before: 3.4 ± 3.2 , after: 3.3 ± 3.0 , $p=0.768$). Significant improvement in fatigue POMS-subscale was noted in the yokukansan (before: 6.2 ± 4.8 , after: 4.1 ± 4.0 , $p=0.002$) but not in the placebo group (before: 5.7 ± 4.5 , after: 5.2 ± 4.6 , $p=0.452$). The time \times group interaction by repeated ANOVA on the improvement in depression-dejection was significant ($p<0.019$) and that in fatigue showed a trend ($p=0.073$).

Conclusion: Yokukansan does not increase the SC-treatment's success-rate but has additional positive effects on the psychological states due to the SC-treatment in smokers with depressive tendencies but without apparent mental disorders. 