

## **BDNF level in vascular depression and the therapeutic role of Actovegin**

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Introduction: The BDNF deficit in organic brain insufficiency and depression is actively discussed. The aim was to analyze the possibility of enhancing the outcome by Actovegin similar in some aspects of structure to BDNF. Material and methods: 30 patients/age – 71.6 + \_3, 9 years/ with vascular depression observed. Main group (n=15) received antidepressants (SSRI) and Actovegin 400 mg in intravenous infusions daily for 10 days followed by oral treatment 600 mg per day during 3 weeks. Control group (n=15) received antidepressants only. Clinical data and BDNF concentration assessed at the beginning and on the 30th day. Cornell and CGI scale were used. Statistics included Fisher /F/ and Mann-Whitney /U/ tests. Results: Significant improvement /assessed by CGI/ noted in 65.7% of the main group compared to 44.1% in the controls (F=2.4; p0.05). More prominent effect concerned feeling of sorrow, everyday activity, inhibition and diurnal variation of affect /p0,05/. Median BDNF level among all patients increased from 92,1+\_5,7 to 124,1+\_7,1 /U=135,8; p0,05/. No statistical difference found in BDNF concentration between highlighted groups at both stages of the study. Conclusions: Results of vascular depression therapy can be augmented by Actovegin. It is possibly related to neuroplasticity activation significant in depression /especially organic/ regress. Underlying neurochemical mechanisms are complex and not only BDNF-dependent.