A BIOPSYCHOSOCIAL MODEL OF INTERFERON-α-INDUCED DEPRESSION IN PATIENTS WITH CHRONIC HEPATITIS C INFECTION

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Introduction: The aim of this prospective study was to gain a complete picture of the biopsychosocial effects of interferon-α treatment of patients with chronic hepatitis C. The predictors of depressive development and changes in health-related quality of life, life satisfaction and cognitive ability would be measured with the inclusion of the social context. Furthermore, the effects of interferon treatment on indoleamine 2,3-dioxygenase, the level of tryptophan supply in the brain, the development of neurotoxic kynurenine metabolites, and the thyroid glands were investigated. Therefore, for the first time the conditions for the development of depressive episodes in HCV patients treated with interferon-α were examined over the entire period of treatment as well as three months later, applying a holistic biopsychosocial model.

Methods: Psychiatric and biological assessments were carried out at six different times: before, during (at one, three, six and nine months), and after the end of interferon-α treatment.

Results: During IFN-α treatment 22 (53.7%) patients fulfilled the criteria for a treatment-related depressive disorder at least once during treatment. Contributing factors are tryptophan depletion (tryptophan to competing amino acids quotient), increased neurotoxic challenge (kynurenine to kynurenic acid quotient), less social support, female gender, preexisting psychiatric vulnerability, means of transmission, low financial security, impaired sexual satisfaction, small circle of friends, impaired role physical, strong body pain, low general health and vitality, reduced social functioning, impaired mental health and role emotional.

Conclusions: The awareness of relevant risk factors of IFN-α treatment-induced depression is essential to develop preventative treatment strategies.