

The relationships of perceived fatigue, cortisol, and cytokine in Koreans with chronic hepatitis B

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The purpose of this study was to examine the relationship of perceived fatigue, cortisol, and cytokine in patients with HBV. The severity of fatigue was measured with the revised Piper Fatigue Scale among 143 subjects, and the cortisol and cytokine levels were measured using the serum samples of the subjects. The revised Piper Fatigue Scale consisted of 22 numerical items. A descriptive analysis was performed to determine the subjects general and disease-specific characteristics; the correlation of the level of fatigue, the serum cortisol level, and the serum cytokine (IL-6 and TNF- α) were examined using Pearson's correlation coefficient; and quantile regression analysis was used to estimate the changes in the cortisol and cytokine levels, depending on the fatigue level. The mean score of overall fatigue was moderate. There were no statistical differences of serum cortisol, IL-6, TNF- α level by fatigue groups. The overall fatigue score increased as the cortisol level decreased, it was significantly negative correlation ($r = -0.178$, $p = 0.031$). The overall fatigue score increased as the IL-6 and TNF- α level increased. However, it was not statistically significant. TNF- α was only significant as a predictor on fatigue. The cortisol level depending on fatigue in cognitive/mood was significant in the 70th, 80th, 90th quantile which were severe levels of fatigue. The IL-6 level depending on fatigue in overall and cognitive/mood were significant in 90th quantile. Cortisol, IL-6 and TNF- α were related with perceived fatigue, particularly, in cognitive/mood dimension in patients with HBV. This suggests that the fatigue patterns of patients with HBV are related to mental and mood states and physical responses such as cortisol and cytokine are correlated with their nature of fatigue. In clinical, the intervention to manage fatigue should be developed based on the characteristics of fatigue in patients with HBV.

Biography

Yeonsoo Jang is an Assistant Professor in Yonsei University, College of Nursing, Seoul, South Korea. She is interested in researches related to clinical symptoms and self-management behaviors of patients with chronic diseases.

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