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Associations between low back pain, disability, functional status, and serum interleukin-1 β level

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Abstract: Aim: In the past the role of biochemical mediators of inflammation in back pain received little attention. The purpose of the present study was to examine the association between serum IL-1 β level in patients with low back pain (LBP) and its effect on their functional status. Methods: This cross-sectional study included 88 LBP patients with symptom duration of 6 months or longer and 65 healthy controls. Serum analysis was performed using ELISA. The LBP group completed the Roland-Morris Disability Questionnaire and Oswestry Disability Index in order to evaluate their functional status. Results: Mean IL-1 β level was significantly higher in the LBP group than in the control group. As the duration of LBP and age increased, IL-1 β level also increased significantly. We observed a positive correlation between IL-1 β level and Oswestry Disability Index score. Conclusion: Proinflammatory cytokine levels, including IL-1 β , were elevated in LBP patients, which affected their functional status. Determination of the influence of cytokines in LBP may aid in improving diagnostic and therapeutic interventions for LBP.

Key words: Low back pain, interleukin-1 β , functional status

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