Abstract

OBJECTIVES:

To investigate the protective effects of L-carnitine (LC) on lungs in an experimental obstructive jaundice (OJ) model.

METHODS:

This was conducted for 2 months between May 2011 and July 2011 at Suleyman Demirel University School of Medicine Experimental and Clinical Research Center, Isparta, Turkey. Thirty-eight Wistar-Albino rats with an average weight of 250-300 g were divided into 3 groups of control, OJ, and OJ + L-carnitine treatment (LCT). L-carnitine was injected intravenously into the tail vein at a dose of 50 mg/kg/day for 10 days to the LCT group. Animals were sacrificed 10 days later. Enzyme levels were measured in the lung tissue; malondialdehyde, myeloperoxidase (MPO), glutathione peroxidase (GSH-Px), catalase, and superoxide dismutase. Tumor necrosis factor-alfa, interleukin 6 (IL-6), IL-8, and C-reactive protein levels were studied in plasma samples. Histopathological changes in the lungs were examined.

RESULTS:

There was a decreased in GSH-Px, MPO, and IL-8 levels (p less than 0.05) in the LCT group. The histopathological examination showed that neutrophil leukocyte infiltration and edema formation decreased and destruction of lung parenchyma disappeared following the treatment with LC (p less than 0.05).

CONCLUSION:

L-carnitine has a protective effect against lung damage due to experimental obstructive jaundice, possibly by altering anticytokine and antioxidant activity, and by decreasing the neutrophil migration.