ROLE OF CYTOKINES IN ALCOHOLIC LIVER DISEASE

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Background Alcohol liver disease (ALD) is a major cause of morbidity and mortality worldwide. Chronic alcohol consumption leads to hepatocellular injury, fat accumulation, liver inflammation, liver fibrosis and cirrhosis or hepatocellular carcinoma. Cytokines are inflammatory mediators and one of the key factors in the various aspects of the pathophysiology of ALD.

Aims To investigate cytokines in patients with ALD

Methods Our study was conducted in Thai Nguyen National Hospital and 103 Military Hospital. Tumour necrosis factor alpha (TNF-α), transforming growth factor beta (TGF-β), interleukin – 1β (IL-1β) and interleukin-12 (IL-12) were measured in 105 cases of ALD and 40 healthy volunteers which were regarded as the control group. Using ELISA kit supplied by Wkea Med Supplies Corp, China. We used median for comparison because of non-standard distribution.

Results Age of 45–59 accounts for the highest rate of 50.5%. Compared to the control group, patients with ALD showed significantly lower TGF-β (1172.28 ng/mL vs 110829.44 ng/mL, p<0.001), TNF-α (158.8 pg/mL vs 173.64 pg/mL, p<0.005). ALD patients had significantly higher IL-1 β (14.56 ng/L mmol/L vs 3.19 ng/L, p<0.001), IL-12 (27.47 ng/L vs 4.0 ng/L, p<0.001) than that in the control group. Levels of serum TGF-β and IL-1 β are associated with liver fibrosis stage (p<0.001). Serum IL-12 and TNF- α levels reflected the different stages of alcoholic liver disease (p<0.05).

Conclusions Cytokines play important roles in the development of ALD. They have the potential to be biomarkers of alcoholic liver disease. More studies are needed to increase the understanding of the pathogenesis of ALD to open new therapeutic avenues for ALD.