Some Proinflammatory and Anti-inflammatory Cytokines In Cirrhotic Ascitic Patients With and Without Spontaneous Bacterial Peritonitis

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Abstract

Cytokines are known to play a central role in the regulation of immune and inflammatory responses. Therefore, we measured serum and aseitie fluid levels of some proinflammatory [interleukin -IB (IL-1B) ; interleukin -6 (IL-6) and tumour necrosis factor-a (TNF- a)] and anti-inflammatory [inerleukin -1B (IL-1B)] cytokines in ' cirrhotic ascitic patients with and without spontaneous bacterial peritonitis (SB?) , to assess a possible relation between their levels and the outcome of patients with SBP. The present study included 15 cirrhotic patients with sterile ascitic fluid, 15 cirrhotic patients with SBP and ١٠ healthy subjects as a control group. The serum levels of all studied cytokines were significantly higher in cirrhotic patients with sterile ascites compared to healthy control subjects. Ascitic fluid levels of IL-1B, TNT- ٥ and IL-6 were higher in cirrh٩tic patients with SBP compared to those without SBP (5J.3 ±10.2 vs. 41.5 ±9.3pg/ml; 165.8±41‹3 vs 25.4± 11.4 pg/ml and 3415+504.3 vs 1352± 162.2 pg/ml, respectively]. By contrast, ascitic fluid levels of IL-10 did not differ significantly in patients with SBP compared to those without SBP (640.3±210.1 pg/ml vs 540.6±152 pg/ml (p>0.05)]. Ascitic fluid levels of IL-1B, TNT- a and IL-6 were lower in survivor patients with SBP (n=10) compared to non-survivors (n=5) [37.5 ±10.4 vs 56.3 ±15.6 pg/ml (p<0.05); 35.5±40.9j vs 201.7±50.1 pg/ml (p< 0.01) and 2651.2±340.3 vs 3752±540.2 pg/ml (p<0.01), respectively], while the ascitic fluid levels of IL-10 were higher in survivors compared to non-survivors [760.8±225 pg/ml vs 428.6±153.1, (p<0.01)]. After efficient anti-microbial treatment of SBP, ascitic fluid levels of all studied cytokines reduced significantly except 10.Our results suggest that IL-10 may have a regulatory control of the inflammatory process in cirrhotic patients. Ari imbalance in the production of proinflammatory (IL-1B, TNF-a and IL-6) and anti-inflammatory (IL-10) cytokines may be related to the outcome of patients with SBP. Further studies on the therapeutic use of recombinant If-10 in patients• with SPB are recommended.

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