P01-168

SINGS OF APOPTOSIS OF IMMUNOCOMPETENT CELLS IN PATIENTS WITH DEPRESSION

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Data have been obtained showing that programmed cell death - apoptosis - plays an important role in mediating the mechanisms of adaptation of the body to external influences. Studies were performed using 26 patients with depression (20 women and 6 men) with a mean age of 48,0±12,6 years. The control group consisted of 20 healthy subjects, identical in gender and age to patients in the experimental group. Measures of apoptosis of peripheral blood lymphocytes and serum cortisol concentrations were determined. A significant increase in lymphocyte apoptosis was found in patients with depression, resulting in an increase in the proportion of lymphocytes expressing the FAS receptor; cells with morphological signs characteristic of apoptosis (nuclear condensation, vacuolization) were also seen. The proportion of neutrophils with sings of spontaneous apoptosis in patients with depression prior to treatment was greater then that in healthy subjects, with values of 0,63±0,26% and 0,25±0,12 respectively ($p< 0,05$). The proportion of lymphocytes with fragmented nuclei was also greater, at 2,03±0,72% compared with 0,97±0,35 in healthy controls ($p< 0,05$). An increase in serum cortisol to 440,64±22,04 nM was found in patients with depression, while the mean in healthy subjects was 323,03±21,45 nM. A positive correlation between cortisol and CD95 cells was found, demonstrating the important role of corticosteroids in controlling expressing the apoptosis marker in immunocompetent cells. A high level of $CD95^+$ lymphocytes and a high level of spontaneous apoptosis may result from the destructive influences of stress on the body of depressed patients.

https://doi.org/10.1016/S0924-9338(09)70789-8 Published online by Cambridge University Press