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CONFORMATION OF ALBUMIN BINDING SITES ARE DISTURBED IN SCHIZOPHRENIA

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Aim: Investigate some properties of albumin binding sites in schizophrenic patients.

Methods: Properties of serum albumin binding sites were studied using quenching of fluorescence of probe K-35 (N-carboxyphenylimide of dimethylaminonaphthalic acid) with nitrate anion. Serum samples were collected from 24 schizophrenic patients and 24 healthy volunteers.

Results: In the absence of quencher specific probe fluorescence in patients was 1,4 times higher than in controls. Fluorescent quenching constant for probe bound to albumin was 2,5 L/mol in patients versus 4,6 L/mol in volunteers ($p < 0,01$). Fluorescent fraction assessable to quenching was significantly lower in patients than in volunteers. Fluorescent decay studies on S-60 synchrotron have revealed in patient's albumin the redistribution between long-lived and short-lived molecules of the probe with increase of the latter. There were found decrease of albumin accessible SH-groups in schizophrenic patients as compared with volunteers.

Conclusions: In schizophrenic patients conformational state of albumin binding sites is significantly disturbed that can lead to changes in protein-ligand interaction and to damage of main albumin functions (transport and detoxification) and aggravation of endotoxicosis.

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