

Generation of nitric oxide as a predictive parameter in medicine

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The paper discusses the question whether the intensity of nitric oxide production may serve in human individuals as a marker of prognostic value. This problem is examined partly on the basis of current literature (see introduction and discussion) and partly in the light of our own clinical studies. The latter were limited to neurological patients who delivered samples of the cerebrospinal fluid. This material was examined for the content of nitric oxide using electron spin resonance (EPR) techniques. In adult patients with meningitis the level of nitric oxide was found to be markedly higher as compared with other groups of brain diseases, such as brain traumas and brain tumors. An excessively intense generation of nitric oxide by the brain, expressed in its high concentration in the cerebrospinal fluid, was frequently associated with an increased number of fatal outcomes. In children suffering from meningitis, EPR analysis made it possible to distinguish between viral and bacterial background of disease in a quick and easy way. Altogether the data indicate that nitric oxide level may become in future a useful prognostic marker at least in the case of neurological diseases.