

Abstract

Pathology of the hypoxic-ischemic insult is very well described in the adult age, whereas the state of knowledge is largely neglected during the perinatal age. Serious insult in the early postnatal age leads often to the permanent neurological consequences or death. Ischemic insult causes over release of the glutamate in a brain tissue. This process is followed by excitotoxic damage of the tissue. Glutamatergic NMDA receptors play a key role in the excitotoxicity. Over-activated NMDA receptors are one of the possible therapeutic approaches against ischemic damage of the brain. Speaking of contemporary projects focusing on perinatal stroke, it is necessary to take into account developmental differences in the brain tissue and the requirements to minimal toxicity of possible drugs. Pharmacotherapies for hypoxic-ischemic damage implemented in the current perinatology are insufficient.