



Cytoprotective effect of amifostine in the treatment of childhood neoplastic diseases – a clinical study including the pharmacoeconomic analysis

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Abstract:

Amifostine is an active aminothiols, which has unique properties as a radio- and chemoprotective agent. It has been reported to prevent myelosuppression and reduce the toxic effects of intensive cancer treatment.

In the study, 57 courses of chemotherapy in 18 children treated because of neoplastic disease were analyzed to assess the early side effects induced by cytotoxic anticancer therapy. In 18 of them amifostine was used as the cytoprotective agent. The estimation of adverse effects was made in accordance to WHO scale of toxicity, and the pharmacoeconomic analysis was based on the costs of intravenous antibiotics, G-CSF, GM-CSF, blood preparations, immunoglobulines and days of hospitalization.

The amifostine use in supportive therapy of neoplastic diseases in children decreases the number of infections thanks to the diminishing of myelotoxic effect. This not only improves the comfort of the patient but also shortens the time of hospitalization. The amifostine therapy limits the costs of treatment, but high price of the drug itself, makes however, the chemotherapy with cytoprotection comparable in pharmacoeconomic analysis to the standard treatment.

Key words:

amifostine, neoplastic diseases, children, cytoprotection
