

PHARMACOECONOMIC ANALYSIS OF TREATMENT OF PATIENTS WITH CRANIOCEREBRAL INJURY

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Introduction. Craniocerebral injury (CCI) is one pressing problems of current medicine. CCI constitute 30-40 % of all injuries and set the 1st place in mortality and disability of the working age people. According to WHO, more than 10 million people in the world get head injury each year, 250 000-300 000 of these cases are lethal. Frequency of CCI in Ukraine is an average of 4-4,2 cases per 1.000.

Aim of research. Comparative evaluation of the cost effectiveness of treatment of patients with acute CCI using two therapy schemes (standard therapy and L-Lysine Aescinat in combination with standard therapy). The choice of the optimal treatment is based on pharmacoeconomic analysis using the cost- effectiveness method.

Objectives and Methods. The results of an opened randomized clinical trial (CT) at the Regional hospital in Dnepropetrovsk, on the efficacy of L-Lysine Aescinat in patients with CCI were analyzed. The CT involved 38 patients randomly assigned to a main and a control group (each group consisted of 19 patients). Standard therapy (antibiotics, tranquilizers, analgesics, anticoagulants, sympathomimetic, antiemetic drugs, detoxification solutions, diuretics) and injections of L-Lysine aescinat were administrated in the main group; the control group was receiving the standard therapy only. The duration of the treatment of patients was 7 days. Direct costs were taken into account for therapy course schemes. Drug prices were taken from an open Morion information system. The number of patients with the following parameters: decreasing of intracranial hypertension, degree of brain perifocal edema and degree of conscious disturbance (Glasgow Coma Scale) was considered as an integral indicator of the effectiveness of treatment. The improvement of the patients' condition was assessed by the significant changes in the studied parameters on the 7th day of

treatment compared with the baseline data.

Results. The improved condition, according to the integral index, was observed for 3 patients from 19 of the control group receiving standard therapy. The combined therapy, using L-Lysine aescinat, helped to improve the condition of 12 patients from 19 in the main group. Calculation of direct costs with the lowest cost of packaging showed that in the main group "standard therapy + L-Lysine Aescinat" was more expensive compared to the standard therapy. The direct costs of treating of patients of the main group have exceeded the costs of the control group in 283.9 €. The results of analysis of the cost-effectiveness showed that the use of the combined therapy has pharmacoeconomic benefits in the treatment of acute CCI compared to the standard therapy, as it has higher therapeutic efficacy of the treatment and is characterized by a lower cost (327.04 € against 1213.50 € the control group) per one effectively treated patient. To confirm the pharmacoeconomic benefits of the combined therapy compared to the standard one an single-variant analysis of sensitivity to changes of drug prices was performed. The cost of treatment of patients with acute CCI, using drugs with the average and maximum price of the package, was compared. The obtained calculations indicate that the results of the pharmacoeconomic analysis of the cost-effectiveness are stable. Despite the increase of the costs of pharmacotherapy with using the average and the maximum value of product packaging, CER figures in the main group were significantly lower than in the control group. In this way, the results of the sensitivity analysis confirm that the use of the combined therapy in the treatment of acute CCI has pharmacoeconomic benefits compared to the standard therapy regardless changes of drug prices.

Conclusions. The cost-effectiveness analysis showed the use of L-Lysine aescinat in combination with the standard therapy was more effective and less expensive for the treatment of 1 patient with craniocerebral injury. The results of the analysis using the cost-effectiveness method are resistant to change of the drug price. Using the drug L-Lysine aescinat with the standard therapy is considered to be clinically and economically more beneficial in the treatment of patients with acute CCI compared to the standard therapy.