

# RESEARCH OF MEDICATIONS CONSUMPTION USED FOR TREATMENT OF ISCHEMIC STROKE ACCORDING TO THE RESULTS OF ABC-ANALYSIS

Lobova I.O., Kotvitska A.A.

The National University of Pharmacy, Kharkiv, Ukraine

socpharm@nuph.edu.ua

Ischemic stroke is one of the most acute medical and social problems that cause significant economic losses to society due to high mortality, significant disability and social exclusion of patients. In terms of hard deficit of funds that occurs in the Ukrainian health care system, the issue of effective, economic and efficient treatment of stroke becomes an important social value.

On the basis of the above mentioned, the aim of our study was to conduct clinical and economic analysis of the actual medical prescription for patients with ischemic stroke in Ukraine.

We conducted a retrospective analysis of the data from the medical records of 581 patients with acute ischemic stroke who received treatment between 2007 and 2012 at a specialized hospital in Kharkiv.

According to the patient record studied, we have determined that the total amount of medical prescriptions was 6280 medications. The analyzed nomenclature of prescribed by doctor medications represented 198 international nonproprietary name from 11 pharmacotherapy groups, which is 322 by the trade names of medications. In order to generalize the obtained statistical data on the use of medications in a specialized hospital we calculated the average medical prescription for the treatment of one patient with ischemic stroke, which were 11 prescribed medicines.

The analysis showed that medications of pharmacotherapy group N «Nervous system» occupy 25.38% of all medical prescription. Among the pharmacological subgroup of anatomical main group N the largest number of prescribed medicines accounts for the subgroup “Psychostimulants” (936 prescribed medicines or 14,90% of the total prescriptions), which is represented 8 international nonproprietary name. It should be noted that the leader for the number of prescribed medicines among this subgroup by the trade names takes *Ceraxon* (Ferrer Therapeutics Inc., Spain), represented 28.77% of the total number of prescribed psychostimulants medicines. Also, doctors appointed quite often such medications as *Cavinton* (24.17%) and *Piracetam* (19.25%).

The next stage of our research that we carried out was ABC-analysis, which consists in dividing medications into three categories (A, B, C) from being the most valuable items to being the least valuable ones, basing its ratings on the following rules:

- A-items are medications which annual consumption value is the highest; the top 70-80% of the annual consumption value typically accounts for only 10-20% of total inventory items;
- B-items are the interclass items, with a medium consumption value; those 15-25% of annual consumption value typically accounts for 30% of total inventory items;
- C-items are, on the contrary, items with the lowest consumption value; the lower 5% of the annual consumption value typically accounts for 50% of total inventory items.

The analysis showed that the class A includes both costly drugs and those drugs that have the greatest rates prescriptions, which is represented 21 international nonproprietary name (10.61% prescribed medicines). In total medications consumption the proportion of this class of medicines was 79.98% of the costs.

The class B included 42 international nonproprietary name of medications (21.21%), and group C consisted of 135 international nonproprietary name (68.18%). Thus, we can say that more than half of the medicines used by doctors, accounted for only 5.12% of all costs associated with the pharmaceutical provision of patients with ischemic stroke. The proportion of consumption of medications from class B was 14.89%.

It was established that the cost of pharmacological subgroup “Psychostimulants” is 244 825.79 UAH (37.16% of total costs). In class A the proportion of the cost of mentioned pharmacological subgroup is 45.46% of the total consumption value, in class B - 5.39% in class C is - 0.02%.

Thus, the results of the frequency analysis of medical prescriptions, that we carried out, has shown that medications of pharmacotherapy group N «Nervous system» occupy 1 594 prescription (25.38% of total prescriptions). It should be noted that among this group of medications by the trade names quiet often was appointed such medicines as *Ceraxon*, *Cavinton* and *Piracetam*.

The ABC/frequency analysis of medical prescription showed that the class A (the most valuable items) included 21 international nonproprietary name of medications (10.61% of all prescribed medicines), accounts for 79.98% of the total consumption value.