

Pharmacoeconomic analysis of the feasibility of generic substitution in the treatment of epilepsy with carbamazepine

Popov O.S., Dobrova V.Ye., Kolodyezna T.Yu., Misiurova S.V.

National university of pharmacy, Kharkiv, Ukraine

Department of clinical pharmacology and clinical pharmacy

clinpharm@nuph.edu.ua

Background. Treatment of epilepsy requires continuous use of antiepileptic drugs (AED) throughout the patient's life to achieve sustained control of epileptic seizures. However, it should be noted that taking original AED is very expensive for patients, and therefore it is important to study ways to reduce cost of epilepsy drug therapy. One of the possible ways to achieve this is to conduct qualitative generic substitution, which requires additional use of therapeutic drug monitoring (TDM) to control the level of drugs in blood.

Materials and methods. Analysis of the pharmacoeconomic feasibility of generic substitution in the treatment of epilepsy with carbamazepine was performed according to the reference book of drugs equivalence Rx index and Compendium. For comparison, the original drug FINLEPSIN 200 RETARD (tablets, 200 mg), 10 tablets in a blister, 5 blisters in a package, manufacturer TEVA Pharmaceutical Industries Ltd., IL, Israel was selected, and CARBAMAZEPINE-FS (tablets, 200 mg), 10 tablets in a blister, 5 blisters in a package, manufacturer ACINO, Ukraine was chosen as a comparison drug. Pharmacoeconomic analysis method was used in this work.

Results. To achieve the goal of the study the cost of epilepsy therapy with carbamazepine-containing drugs during 1 year was calculated. The cost of the original drug was 662,50 UAH per package, cost of generic – 65,91 UAH. According to recommendations on medical use, the average daily dose of carbamazepine for adults is 800 – 1200 mg, equal to 4 – 6 tablets per day. Conducted calculations showed that under the use of the original drug for treatment patient spends from 19 212,50 UAH to 29 150 UAH yearly. Calculated cost of therapy with generic is from 1 911,39 UAH to 2 900,04 UAH yearly. The defined savings under the generic substitution will be from 17 301,11 UAH to 26 249,96 UAH yearly.

Conclusions. Substitution of expensive original drugs with generic ones allows lowering patient's expenses on treatment which is economically efficient. During generic substitution, it is advisable to monitor the level of drugs in the patient's blood for stable control of epileptic seizures, which is possible with the help of TDM. Also, special attention should be paid to the proven quality and effectiveness of generic drugs. In further research, it is planned to conduct an economic assessment of TDM used to perform generic substitution of AED.