МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ

НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ

КАФЕДРА АПТЕЧНОЇ ТЕХНОЛОГІЇ ЛІКІВ

КАФЕДРА ЗАВОДСЬКОЇ ТЕХНОЛОГІЇ ЛІКІВ

Матеріали

III міжнародної науково-практичної конференції

Proceedings of the III International Scientific and Practical Conference

ФУНДАМЕНТАЛЬНІ ТА ПРИКЛАДНІ ДОСЛІДЖЕННЯ У ГАЛУЗІ ФАРМАЦЕВТИЧНОЇ ТЕХНОЛОГІЇ, ПРИСВЯЧЕНА 100-РІЧЧЮ З ДНЯ НАРОДЖЕННЯ Д. П. САЛА

FUNDAMENTAL AND APPLIED RESEARCH IN THE FIELD OF PHARMACEUTICAL TECHNOLOGY, DEDICATED TO THE 100TH ANNIVERSARY OF THE BIRTHDAY OF D. P. SALO

24 листопада 2023 р.

November 24, 2023

Харків, Україна

Kharkiv, Ukraine

УДК:615.014.2:615.2

Фундаментальні та прикладні дослідження у галузі фармацевтичної технології: Збірник наукових матеріалів III Міжнародної науково-практичної конференції, присвяченої 100-річчю з Дня народження Д. П. Сала (м. Харків, 13 жовтня 2022 р.). Х.: Вид-во НФаУ, 2023.- С. 522 (Серія «Наука»)

Збірник містить матеріали III Міжнародної науково-практичної конференції «Фундаментальні та прикладні дослідження у галузі фармацевтичної технології», присвяченої 100-річчю з Дня народження Д. П. Сала.

Розглянуті теоретичні аспекти та перспективи розробки лікарських препаратів, висвітлені напрямки наукової роботи спеціалістів фармацевтичної галузі, що стосуються питань сучасної технології створення лікарських препаратів, контролю їх якості, організаційно-економічних аспектів діяльності фармацевтичних підприємств, маркетингових досліджень сучасного фармацевтичного ринку, фармакологічних досліджень біологічно активних речовин.

Для широкого кола наукових, науково-педагогічних і практичних працівників, що займаються питаннями розробки та впровадження сучасних лікарських препаратів.

Матеріали подаються мовою оригіналу.
За достовірність матеріалів відповідальність несуть автори.

УДК:615.014.2:615.2

НФаУ, 2023

ФУНДАМЕНТАЛЬНІ ТА ПРИКЛАДНІ ДОСЛІДЖЕННЯ У ГАЛУЗІ ФАРМАЦЕВТИЧНОЇ ТЕХНОЛОГІЇ, ПРИСВЯЧЕНА 100-РІЧЧЮ З ДНЯ НАРОДЖЕННЯ Д. П. САЛА

Матеріали

ІІІ Міжнародної науково-практичної конференції

24 листопада 2023 р.
м. Харків, Україна

To determine the total catechin content in a 25.0 mL volumetric flask, 1.0 mL of tincture was added and brought to the mark with distilled water (Solution A). A 1 mL of prepared solution A was mixed with 7.5 mL of 1% vanillin solution in 96% ethanol in a 25 mL volumetric flask. Than the solution was made up by the addition 0.5 mol/L HCl in 96% ethanol solution. The mixture was analyzed at 505 nm after standing for 30 min as compensation liquid was 70% ethanol. The total content of catechins was determined using the standard substance (epigallocatechin-3-O-gallate). The calibration curve was plotted with interval concentrations 100 – 400 · 10^{-6} g/mL (Fig 1). The percentage of total content of catechins, expressed as epigallocatechin-3-O-gallate was calculated according to following expression:

$$X(\%) = \frac{C \times K_{dil} \times 1000}{V}$$

where, C – concentration of epigallocatechin-3-O-gallate according to calibration curve, C·10^{-6}; V – volume of tincture, mL; K_{dil} – coefficient of dilution, mL.

Main results. The total content of catechins was 8.43 ± 0.02 mg/mL in the in the tincture of green tea leaves.

Conclusions. The green tea leaf tincture has the perspectives in the developing new medicines, dietary supplements and cosmetologically products.

PHARMACOECONOMIC RATIONALE FOR IMPROVEMENT DRUG SUPPLY AND FORECASTING THE NEED FOR MEDICINAL PRODUCTS IN OPHTHALMOLOGICAL DEPARTMENTS OF MILITARY MEDICAL INSTITUTIONS

Nehoda T.S., Polova Zh.M., Valinkevich D.V.
National Medical University O.O. Bogomolets, Kiev, Ukraine

Introduction. The transition to market economic conditions led to a noticeable decrease in funding for budgetary medical institutions, which initiated the problem of providing quality medical care in conditions cash shortage. In the structure of diseases requiring inpatient surgical and therapeutic treatment in military hospitals, ophthalmological pathology occupies one of the leading places. Treatment of such nosological forms how glaucoma, cataracts and traumatic eye injuries require treatment specialized medical care in the presence of a certain list of expensive medicines (medicines) and medical equipment.

Analysis of materials from domestic and foreign publications devoted to the treatment of ophthalmological diseases shows that the quality of specialized medical care in ophthalmology, as well as subsequent rehabilitation of patients, largely depend on the effectiveness of the treatment drug therapy. Therefore, for military medical institutions of various levels

The solution to the problem of justifying the pharmacoeconomic standard for drug consumption, which is necessary for the treatment of patients for the planned period, remains very relevant. The formation, justification and introduction of FES will ensure not reducing the proper level of quality in the provision of specialized medical care to patients in need of the same type of treatment and diagnostic measures,

involving the expenditure of financial resources not exceeding a certain level of costs for drug provision.

The aim of the study. Pharmacoeconomic rationale for improvement drug supply and forecasting the need for medicinal products in ophthalmological departments of military medical institutions.

Research methods. Accounting and reporting documentation of pharmacies, history diseases and medical prescription sheets reflecting drug consumption and survey data from expert doctors, as well as socio-demographic portrait of patients in ophthalmology departments.

Main results. At the first stage, more expensive generics were replaced with similar drugs at a lower cost. However, both drugs had the same international nonproprietary name and differed only in cost, with comparable effectiveness. As a result, the range of drugs has been significantly reduced.

At the second stage, drugs with different generic names, often belonging to different pharmacological groups, were assessed but having similar pharmacotherapeutic effects. For this purpose, we used the method of multicriteria optimization of the drug nomenclature based on the analysis of hierarchies.

Ambiguity in the interpretation of the results of pharmacotherapy and the costs spent funds for it required the involvement of experts in the assessment.

The selection of highly competent specialists for examination was carried out methods for assessing service status, length of service and qualifications. 29 ophthalmologists were involved as experts.

In each pharmacotherapeutic group, drugs were assessed according to several parameters: therapeutic effect, side effects, cost, and also by frequency of prescription, reflecting the degree of popularity of a particular trade name among doctors. The drugs were compared with each other in pairs for each of these four characteristics.

Drugs received as a result of multi-criteria evaluation low rating, lie were excluded from the assignment sheets, and were replaced by more effective ones from the point of view of all evaluation characteristics. A similar approach was used for all groups of drugs, which made it possible to reduce the range of drugs and the costs of pharmacotherapy.

At the third stage, an ABC/VEN analysis of the drug nomenclature was carried out by frequency of prescription, cost of pharmacotherapy and number of packages.

ABC analysis was carried out in combination with VEN analysis due to the fact that
the contribution of a particular drug to the consumption structure must be considered in combination with the distribution of the range of drugs according to their importance in pharmacotherapy. Simultaneously with indicators of need in physical terms cost standards for the need for drugs were determined - the total cost of PT for one patient and the average daily cost of PT for one patient according to standard formulas. After the calculations, the results obtained were compared with the original data of total and average daily costs and the reliability of their differences was assessed. Each standard must indicate:

- pharmacotherapeutic group, name of the drug, standard dosage, average amount of the drug per patient;

- disease code based on the "10 Classification and Nomenclature of Diseases and Causes of Death" (ICD-10);
-average duration of treatment;
- average medicinal cost of 1 bed-day and average medicinal cost of 1 treated patient.
Analysis of scientific forecasting methodology showed that the most a normative method is acceptable for solving the problem, as one of the most accessible.

Conclusions. Thus, the methodology we developed and substantiated for improving the drug supply of ophthalmological departments of military hospitals included: the formation of a database reflecting the socio-demographic characteristics of patients in the ophthalmological departments of military hospitals, the range, quantity and order of drugs used during inpatient treatment;

- distribution of medical histories included in the database according to clinical and statistical combined groups;

- application of variance and regression analysis of the database with the purpose of justifying the correctness of the formation of the DRG and the choice of direction reducing costs for drug consumption;

- optimization of the range of drugs with the replacement of more expensive generics with cheaper analogues, analysis of hierarchies, use of ABC analysis and assessment of irrational choice and combination of drugs;

A MODEL FOR OPTIMIZING PHARMACEUTICAL CARE FOR CHILDREN IN OUTPATIENT CLINICS USING THE EXAMPLE OF PATIENTS WITH ENT DISEASES

Nehoda T.S., Polova Zh.M., Lazarenko V.O.
National Medical University O.O. Bogomolets, Kiev, Ukraine

Introduction. One of the most common pathologies in childhood is ENT diseases, which occupy second place in the structure of the general morbidity of children, accounting for 19% of all diseases.

If diseases occur in a child, including diseases of the ENT organs, Parents first of all turn for medical and medicinal help to an outpatient clinic (APU), in which the quality and frequency of prescribed therapy have a great influence on the healing process. However, currently there are negative trends in the provision of pharmaceutical care in APU, which is due to the following problems: diversity of the range of medicines (medicines) the lack of formulary lists of medicinal products (MPs) for the treatment of a number of diseases in children in APU; the lack of software tools that facilitate the development of formulary lists of drugs, as well as the rationalization of drug prescriptions by local doctors; appointment pharmacotherapy without taking into account the patient's preferences in choosing medications, as well as his economic capabilities when purchasing them; lack of awareness that the patient (his parent) during outpatient treatment is the main participant in pharmacotherapy and the need to achieve understanding and acceptance of this process.

This situation often leads to irrational prescriptions of drugs for treatment of children in APU, the inability of parents to purchase the entire range of drugs,