

Introduction. Bronchial asthma is one of the most common chronic diseases among children and adults over 40 years. This illness requires complex treatment, aimed at avoiding trigger factors, medication, physical and psychological therapy. The prevalence of this pathology in the country is 4%, with 160 thousand asthmatics registered. The disease predominates in male gender, with a ratio of 1.5-3 / 1. The overall prevalence of asthma varies from 1% to 18% in different countries and the mortality rate is currently estimated between 2 and 4 cases per 100,000 population in a year.

Aim of the study. Assessment of bronchial asthma medication of the 4 stages of severity (intermittent, persistent, moderately persistent and severely persistent) in terms of the 5 stages of treatment.

Materials and methods. Analysis of data from the speciality literature of the last 5 years.

Results. Depending on the level of control and the evolution of the disease, the treatment of asthma is accomplished in 5 steps. For all stages, emergency medication consists of β 2 rapid-acting inhaled agonists (salbutamol nictimer dose 600-800 μ g, fenoterol 600 μ g) inhaled anticholinergic drugs (ipantropium bromide 60-120 μ g) and methylxanthines (300-800 μ g theophylline). At Stage 1, treatment is indicated for patients who experience symptoms of AB less than 2 times a week. For this patient group only emergency medication is used. Step 2 is addressed to patients with persistent asthma symptoms. In the control medication, low-dose inhaled corticosteroids or leukotriene antagonists (montelukast 10 mg, zafirlucast 20 mg) are recommended. Step 3 is for patients who lack control under treatment 1 and 2. For maintenance, combinations of β 2-agonists + CSI, leukotriene + CSI antagonists or theophylline retard + CSI are recommended. Step 4 is recommended for patients who are unstable in 3rd stage treatment. Control medication includes: Long-acting CSI + β 2 agonists + small doses of retard theophylline. Step 5 treatment is for those with severe AB. The medication is orally CS + anti-IG E.

Conclusions. The division of the contemporary AB treatment in the 5 stages would lead to the exclusion of overdosing and would allow a more individualized and personalized approach for the patient.

Key words: bronchial asthma, emergency medication, control medication

383. STUDY OF THE SPECTRAL CHARACTERISTICS OF DIOXOINDOLINON

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Introduction. The anxiety disorders, depression and stress disorders are brought on by psychological challenges faced by a large number of people. Based on the WHO data, the number of people that suffer from depression has increased to 322 million, or more than 18 percent over the last decade. The therapy of mental disorders needs a continuous updating. At the lab of organic and biopharmaceutical synthesis in the University of chemistry, a new, autochthonous compound was synthesized in the isatine group, with the pronounced anti-depressive, sedative and tranquilizing activity (according to preliminary studies).

Aim of the study. To investigate the spectral characteristics of the substance 1'-(2-oxo-propil)-spiro[[1,3]dioxolane-2',3'-indolin]-2'-one.

Materials and methods. We used Spectrophotometers UV-VIS Agilent 8453 and Bruker AC-E 400 SUA, a device used to determine the melting point Melting-Point Meter KSPII, electronic balance OHAUS DV125 CD, chemical dishes, solvents and reagents, according to the requirements of the European Pharmacopoeia.

Results. The substance, formula bruto C₁₃H₁₃NO₄, Mr =247,25, represents an odorless white crystalline powder, slightly soluble in alcohol, chloroform and benzene, poorly soluble in water and ether. Melting point 125-127°C. The spectrum in alcohol was recorded in the range of wavelength 200-360 nm. The alcoholic solution 2,5mg/L manifests 2 maxims with a different intensity: at 215 ± 2 nm (3150 and at 258 ± 2 nm (490). Some spectrum of nuclear magnetic resonance ¹H and ¹³C RMN (200.13 and 50.32 MHz) in 2-% solution of CDCl₃ were recorded. The value of chemical movements is in the system δ ppm to the signal TMS in correlation with the signals CHCl₃ (δ_H 7.24 și δ_C 77.0 ppm). ¹H NMR δ, ppm, J/Hz: 2.17 s (3H, Me), 4.28-4.39 m (4H, 2CH₂), 4.51-4.60 m (2H, CH₂), 7.07-7.11 t (1H, CH, J=7.36 Hz), 7.29-7.33 t (1H, CH, J=7.65 Hz), 7.38-7.39 d (1H, CH, J=7.36 Hz). ¹³C NMR, δ, ppm: 201.85 (C=O), 173.25 (NC=O), 143.35 (C₄), 131.86 (C_{7a}), 125.14 (C₃), 123.70 (C₅), 108.52 (C₆), 102.13 (C₇), 101.97(C_{3a}), 65.69 (OCH₂), 27.02 (Me).

Conclusions. The results of the study of spectral characteristics of 1'-(2-oxo-propil)-spiro [[1,3] dioxolane-2', 3'-indolin]-2'-one will be used to elaborate the methods of analysis and standardization for this substance.

Key words: anxiety, depression, monoamine-oxidase inhibitors, spectrophotometry UV-VIS

384. PRINCIPLES OF ADMINISTRATION AND MONITORING OF SPECIFIC TREATMENT OF BURNS IN PEDIATRIC PATIENTS

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Introduction. Burns in children are serious tissue damage with necrosis of skin, adipose tissue, muscles, tendons, nerves, blood vessels, bones, disturbances of homeostasis, with the development of acute multiorganic failure syndrome and septic complications. These circumstances require the development of measures for the prophylaxis and treatment of pathological disorders developed locally and in the organs' system due to thermal trauma. Depending on the depth degree, we distinguish burns of I, II, III, IV degrees. The distribution of burns according to heat transfer mechanism and aggression type is: 72.8% - hot liquids; 14.2% - flame; 8.7% - incandescent objects; 3.6% - electrical; 0.7% - chemical, solar. According to the statistics of the Republican Clinic of Burns and Plastic Surgery, burns make up 5-6% of all acute pediatric traumas. Breakdown of burns by age: 0-3 years 48.6%; 3-7 years 22.4%; 7-15 years 29.0%. According to world statistics, burns constitute a very important issue due to their high frequency in the pediatric population of about 3.4-36%.

Aim of the study. To elucidate the particularities of the development of burns in children and some correct contemporary principles in the administration and monitoring of specific treatment.

Materials and methods. Analysis of data from the Clinic of Burns and Plastic Surgery during 2007-2017.

Results. In the last 10 years, 5715 children with burns (0-3 years - 50.6%, 4-7 years - 24.4%, 8-18 years - 25%) were treated in the Clinic of Burns and {Plastic} Surgery. Of which: 2844 (55.2%) – with superficial burns, 2871 (44.8%) – with deep burns and 645 children were hospitalized with combustion shock. Contemporary treatment of burns and post-combustion sequelae consists of: necrophasciotomies, amputations, joint amputations, early necrectomies, free skin plastics, plastics with pedicle flaps, plastics with remotely migrated flaps, tissue expansion, but also of drug application. Currently, early surgical treatment of deep burns has become an axiom because the combustion disease consequences depend directly on the skin restoration term.