

ЗБІРНИК МАТЕРІАЛІВ КОНФЕРЕНЦІЇ «МЕДИЦИНА ТРЕТЬОГО ТИСЯЧОЛІТТЯ»



2020

20-22 СІЧНЯ



УДК 61.061.3 (043.2)

ББК 61 (063)

Медицина третього тисячоліття: Збірник тез міжвузівської конференції молодих вчених та студентів (Харків – 20-22 січня 2020р.) Харків, 2019. – 717 с.

Відповідальний за випуск проф. В.В. М'ясоєдов



Gaychuk Alesia, Saveliev Vladyslav, Sinelnik Vyacheslav

EXPERIMENTAL RESEARCH OF THE INFLUENCE OF PHARMACEUTICAL COMPOSITION OF ROFECOXIB WITH CAFFEINE ON CRPA UNDER THE CONDITIONS OF FORMALIN EDEMA

Ukraine, Kharkiv

Kharkiv National Medical University

Department of Medical and Bioorganic Chemistry

Scientific advisor: prof. Syrova G.O.

Pain is the main complaint of patients when various diseases occur, including inflammatory ones. Inflammatory processes accompany a person during lifetime and represent one of the most common pathologies. The result is the deterioration of the quality of patients' life. Rational pharmacotherapy of inflammatory processes and pain syndromes is an important problem of modern medicine, which is possible to be solved with the help of non-steroidal anti-inflammatory drugs (NSAIDs) of different chemical structure. Coxibs are one of the most modern groups of NSAIDs. According to the data it is known that to enhance the pharmacological effect of NSAIDs the adjuvants should be added, among them is 1,3,7-methylxanthin (caffeine). The purpose of our study was to establish how the pharmaceutical composition of 4-[4-(methylsulfonyl)phenyl]-3-phenyl-2(5H)-furan (rofecoxib) with caffeine influences the mnemonic activity of the rat's brain on the basis model of development of conventional reaction of passive avoidance (CRPA) under the conditions of formalin edema.

Materials and methods. At the beginning of testing the animals were placed in a bright compartment. When transitioned to the dark compartment the rats received electrodermal irritation with alternating current (20-30 mA, 1 s, 50 Hz). The latent time of the first entrance to the dark compartment and the time of staying there were fixed; testing for reflex reproduction was performed in 1 hour: the number of animals with produced reflex. The animals were divided into 6 groups (6 animals per group). The rats 1st group (control) were injected intragastrically with 3 % starch mucus (2 ml per 200 g body weight). In the 2nd group the formalin edema was modeled and were also injected intragastrically with 3 % starch mucus. The animals of 3rd-6th groups were injected with the following preparations based on 3 % of starch mucus in the form of a



suspension on 1 hour before the development of the maximal formalin edema: animals of the 3rd group – with rofecoxib (1.5 mg/kg), 4th group under the same conditions – with caffeine (0.6 mg/kg), the 5th group – with composition of rofecoxib (1.5 mg/kg) with caffeine (0.6 mg/kg), 6th group (the reference one) – with diclofenac sodium (8 mg/kg).

Results of the study. Formalin edema influenced the mnemonic activity of the brain of rats and manifested a marked tendency to reduce the reflex latent period (LP) (18.6 ± 3.1 s instead of 21.0 ± 1.9 s) in control and decrease the duration of his manifestation (17.2 ± 2.6 s instead of 51.2 ± 9.9 s in control), weakening of the short-term memory (STM) production (80 % instead of 83 % in control). Rofecoxib in the conditions of formalin edema resumed the LP reflex (20.8 ± 3.2 s), reduced the duration of its manifestation (15.3 ± 3.2 s) and negatively influenced the memory recovery (67 %). Adding to it caffeine contributed to the improvement of the studied indicators: LP while injecting the pharmaceutical composition rofecoxib and caffeine probably increased (47.3 ± 12.3 s) even compared with the control at a statistically possible reduction length of stay in the dark compartment (6.0 ± 1.1 s). Among all the animals studied in this group the development of the STM (100 % of rats) was observed in contrast to the reference-preparation of diclofenac sodium (80 %), which did not affect the formation of the STM in conditions of formalin edema, although positively influenced the parameters of LP (32.8 ± 11.3 s) and similar to pharmaceutical composition reduced the period of stay of rats in a dark compartment (10.8 ± 3.1 s). The received data of the pharmaceutical composition rofecoxib and caffeine injection are influenced due to the fact that its composition, in addition to NSAID rofecoxib, a psychostimulator and adjuvant NSAIDs caffeine was added which probably increased LP (42.4 ± 8.9 s) while being injected separately, even when compared with the control, and positively influenced the formation of the STM among rats (100 %).

Conclusion. The created pharmaceutical composition of rofecoxib with caffeine influences the mnemonic activity of the brain of rats under the conditions of formalin edema: positively influences the cognitive functions in rats.



Prospects. To investigate the effect of the studied pharmaceutical composition on the processes of cognitive functions preservation of rats in dynamics (in 1, 3 and 7 days).

Ishan Verma, Olga Avilova

ORGANOMETRIC CHANGES OF RAT'S THYMUS AFTER INFLUENCE OF PROPYLENE GLYCOL

Ukraine, Kharkiv

Kharkiv National Medical University

Department of Human Anatomy

Scientific advisor: prof. Denis Shyian

Introduction. One of the global problems of humanity - pollution of environment, which needs immediate solution as adaptation capabilities of human body are not limitless. Xenobiotics impact lead to significant changes in organs and tissues, and subsequently they explicit pathology at the molecular and cellular level, and finally, at the macrolevel. Every year, industrial production introduces dozens of new polyols characterized by significant amounts of synthesis, which carry a potential and real danger to the population and are

Aim of the study. Elucidate the organometric changes occurring in thymus of male rats under propylene glycol exposure.

Material and methods. 40 WAG matured male rats were divided randomly into two groups. The first group served as a control and constituted 8 animals. The second group of 32 rats, 8 rodents in each, were treated via gavage by aqueous solutions of propylene glycol in doze 1/10 LD₅₀ in conversion to 26,38 g/kg during 7, 15, 30, 45 days. All animals were sacrificed on the term defined by experimental design. Thymus specimens were dissected out, and linear dimensions (length, width, height) using digital caliper were measured, along with mass and volume of the thymus. To determine the limits of the variability of the morphometric indices of the thymus the method of calculating its indexes using the formulas is used. For further evaluation of the differences reliability nonparametric criterion of Mann -Whitney was applied.

Results. Noted stable decrease of the thymus mass under the impact of propylene glycol 1/10 LD₅₀ in comparison with control group. The mean mass value was from



ЗМІСТ

ТЕОРЕТИЧНА ТА ЕКСПЕРИМЕНТАЛЬНА МЕДИЦИНА	3
ARJUN BATISH, OLGA AVILOVA	4
OSTEOGENESIS IMPERFECTA: WIDE RANGE OF PRESENTATION	4
FESKOVA A.A.	5
DETECTION OF LEWY BODIES IN NEURAL TISSUE IN PARKINSON'S DISEASE	5
FISHENZON ILLIA, DUHAR SOFIA	7
CERVICAL CANCER: INFLUENCE OF GENES ON DISEASE PROGRESSION	7
GARGI GAUTAM	10
SENSORY MODIFICATIONS OF TASTE AND SMELL DURING PREGNANCY	10
GAYCHUK ALESIA, SAVELIEV VLADYSLAV, SINELNIK VYACHESLAV	12
EXPERIMENTAL RESEARCH OF THE INFLUENCE OF PHARMACEUTICAL COMPOSITION OF ROFECOXIB WITH CAFFEINE ON CRPA UNDER THE CONDITIONS OF FORMALIN EDEMA.....	12
ISHAN VERMA, OLGA AVILOVA	14
ORGANOMETRIC CHANGES OF RAT'S THYMUS AFTER INFLUENCE OF PROPYLENE GLYCOL	14
KISHAN CHANDRA PANDA, TALAT JAHAN, HUBENKO IRINA ANATOLIEVNA	16
DENDRITIC CELLS IN ANTITUMOR IMMUNITY	16
KONOPLIA LINA, KOLTSOVA LARYSA	17
CONGENITAL ATRESIA OF THE DIGESTIVE SYSTEM.....	17
POLUPAN YEGOR SERGEEVITCH	20
IMPACT OF ACADEMIC PERFORMANCE ON THE DEVELOPMENT OF EMOTIONAL BURNOUT SYNDROME AMONG THE MEDICAL STUDENTS.....	20
БАДАЛОВ ЗАУР АДАЛЯТ ОГЛИ, КОЛЬЦОВА ЛАРИСА ВЯЧЕСЛАВІВНА, ГОРСЛОВА ВІКТОРІЯ МИХАЙЛІВНА	22
ПОРІВНЯЛЬНА ХАРАКТЕРИСТИКА РОЗВИТКУ ЛЮДСЬКОГО ПЕНІСА ТА КЛІТОРА.....	22
БАРАНОВА КАТЕРИНА ОЛЕКСАНДРІВНА	24
СУДОВО-МЕДИЧНА ЕКСПЕРТИЗА РАПТОВОЇ СМЕРТІ ПІД ЧАС ФІЗИЧНОГО НАВАНТАЖЕННЯ	24
БОНДАРЄВА Є.І.	26
СІМЕЙНИЙ АНАМНЕЗ ЯК ДЖЕРЕЛО ІНФОРМАЦІЇ ПРО СХИЛЬНІСТЬ ДО МУЛЬТИФАКТОРІАЛЬНИХ ЗАХВОРЮВАНЬ.....	26
БРАТЧУК КИРИЛО ВАДИМОВИЧ	28
ПОРІВНЯЛЬНА ХАРАКТЕРИСТИКА ЗАСОБІВ СЕДАТИВНОЇ ДІЇ В ЕКСПЕРИМЕНТІ ЗА ПОВЕДІНКОВИМИ РЕАКЦІЯМИ	28
БУРОВ АНДРІЙ МИКОЛАЙОВИЧ, ВЕКШИН ВІТАЛІЙ ОЛЕКСАНДРОВИЧ	30
РОЗРОБКА МЕДИЧНОГО ПРЕПАРАТА НА ОСНОВІ ГЕЛЯ КАРБОКСИМЕТИЛЦЕЛЛОЗИ ДЛЯ ЛІКУВАННЯ ОПІКОВИХ РАН	30
ВОЛКОВ ІГОР ІГОРОВИЧ	32
КІСТКОВОМОЗКОВЕ КРОВОТВОРЕННЯ ПРИ ЗАПАЛЕННІ НА ТЛІ ВВЕДЕННЯ КОНТРИКАЛУ	32
ГАРМАШ ІРИНА ВІТАЛІЇВНА, ЛЮБОМУДРОВА КАТЕРИНА СЕРГІЇВНА, ДЕГТЯР КИРИЛО ОЛЕКСАНДРОВИЧ	34
ВИДИ ХІРУРГІЧНИХ ДОСТУПІВ ПРИ ОПЕРАЦІЯХ НА ПІДШЛУНКОВІЙ ЗАЛОЗІ	34
ГОПТА ОЛЕНА ВАЛЕРІЇВНА	35
ПЕРСПЕКТИВИ ВИКОРИСТАННЯ НАНОКОМПОЗИТІВ У ЯКОСТІ АНТИБАКТЕРІАЛЬНИХ АГЕНТІВ.....	35
ГРИГОРЯН ЕДГАР КАРЛОВИЧ, ДАНИЛОВ ОЛЕГ ВАЛЕРІЙОВИЧ, ГЕРБСТ ІНГА ОЛЕКСАНДРІВНА	37
ВСТАНОВЛЕННЯ КРИТЕРІЇВ ОЦІНКИ ДАВНОСТІ НАСТАННЯ СМЕРТІ	37
ГУБІЄВА МАРГАРИТА ТАЙМУРАЗІВНА	38
ОСОБЛИВОСТІ ВИЗНАЧЕННЯ НОВОНАРОДЖЕНОЇ ДИТИНИ ПРИ СУДОВО-МЕДИЧНІЙ ЕКСПЕРТИЗИ ДІТОВБИВСТВА	38
ЗИНЧЕНКО МАРИНА АЛЕКСАНДРОВНА	39
АНАЛІЗ ПРИЧИН НАСИЛЬСТВЕННОЇ СМЕРТІ НОВОРОДЖЕНИХ МЛАДЕНЦЕВ (ЛИТЕРАТУРНИЙ ОБЗОР)	39
ІСАЄВА ГАННА ОЛЕГІВНА	41
ПИТОМА ВАГА МІКРООРГАНІЗМІВ, ЗБУДНИКІВ ЗАХВОРЮВАНЬ ОРГАНІВ ДИХАННЯ У ДІТЕЙ.....	41