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## STUDY OF MORPHOLOGICAL AND MORPHOMETRIC PARAMETERS OF THE ESOPHAGE OF WHITE RATS UNDER THE INFLUENCE OF 5 DIFFERENT ANTI-INFLAMMATORY DRUGS UNDER THE CONDITIONS OF POLYPROGMASIA

*Temirov Orifjon Olimovich*

<https://orcid.org/0009-0009-7373-1350> Bukhara State Medical Institute

**Summary.** Non-steroidal anti-inflammatory drugs (NSAIDs) are one of the most effective and widely used agents for the pathogenetic treatment of acute or chronic pain. However, NSAIDs have a specific negative effect on the gastrointestinal tract. In recent years, the number of works devoted to lesions of the esophagus while taking NSAIDs has increased. In this work, the morphological and morphometric parameters of the esophagus of 50 white rodents aged from 3 to 6 months were studied and analyzed under the influence of 5 different anti-inflammatory drugs on polypragma.

**Keywords:** esophagus, polypragmasia, morphology, morphometry, anti-inflammatory agents.

## ИЗУЧЕНИЕ МОРФОЛОГИЧЕСКИХ И МОРФОМЕТРИЧЕСКИХ ПОКАЗАТЕЛЕЙ ПИЩЕВОДА БЕЛЫХ КРЫС ПОД ВЛИЯНИЕМ 5-ТИ РАЗЛИЧНЫХ ПРОТИВОВОСПАЛИТЕЛЬНЫХ ПРЕПАРАТОВ В УСЛОВИЯХ ПОЛИПРОГМАЗИИ

*Темиров Орифжон Олимович*

*Бухарский государственный медицинский институт*

**Резюме.** Нестероидные противовоспалительные препараты (НПВП) являются одними из наиболее эффективных и широко распространенных средств патогенетической терапии острой или хронической боли. Вместе с тем НПВП оказывают специфическое негативное действие на желудочно-кишечный тракт. В последние годы

увеличивается число работ, посвященных поражениям пищевода на фоне приема НПВП. В данной работе изучены и проанализированы морфологические и морфометрические параметры пищевода 50 белых беспородных крыс в возрасте от 3 до 6 месяцев под влиянием 5-х различных противовоспалительных средств на полипрагму.

**Ключевые слова:** пищевод, полипрагмазия, морфология, морфометрия, противовоспалительные средства.

## **POLIPRAGMAZIYA SHAROITIDA 5 XIL TURDAGI YALLIG'LANISHGA QARSHI DORI TA'SIRIDA OQ KALAMUSHLAR QIZILO'NGACHINING MORFOLOGIK VA MORFOMETRIK PARAMETRLARINI O'RGANISH**

*Temirov Orifjon Olimovich*

<https://orcid.org/0009-0009-7373-1350> *Buxoro davlat tibbiyot instituti*

**Xulosa.** Nosteroid yallig'lanishga qarshi dorilar (NYAQD) o'tkir yoki surunkali og'riqni patogenetik davolashda eng samarali va keng qo'llaniladigan vositalardan biridir. Biroq, NYAQD lar oshqozon-ichak traktiga o'ziga xos salbiy ta'sir ko'rsatadi. So'nggi yillarda NYAQD larni qabul qilishda qizilo'ngachning shikastlanishiga bag'ishlangan ishlar soni ortdi. Ushbu ishda 3 oydan 6 oygacha bo'lgan 50 ta oq zotsiz kalamushlarning qizilo'ngachining morfologik va morfometrik ko'rsatkichlari polipragmaziya 5 xil yallig'lanishga qarshi dori ta'sirida o'rganildi va tahlil qilindi.

**Kalit so'zlar:** qizilo'ngach, polipragmaziya, morfologiya, morfometriya, yallig'lanishga qarshi vositalar.

**Relevance.** Currently, a lot of work is being done to reduce the incidence of polyphragmosis in the medical practice of the healthcare sector of our country. One of them is the Order of the Ministry of Health of the Republic of Uzbekistan No. 121 of July 1, 2020 "Prescribing drugs and receiving, storing and using drugs by the patient in treatment-prophylactic institutions, as well as prescribing drugs to the population in pharmacies contains the order "On approval of the regulation on the procedure of issuing". In the modern world, on the one hand, the creation and implementation of many drugs in practical health care, which are able to cure or improve the patient's condition, is developing at a rapid pace, and

on the other hand, their indiscriminate use causes significant damage to human health. is delivering

In the literature, an acceptable definition of polypharmacy is given - the appointment of more drugs (5 or more) than the clinical condition and quantitative determination - this is called polypharmacy. In medical dictionaries, polypharmacy is also referred to as a "one-prescription" package. This phenomenon is often observed in elderly patients [Guseynov T.S., Guseynova T.S. and b. 2020].

Inflammation and destructive damage of the mucous membrane of the gastrointestinal tract, which occurs against the background of taking non-steroidal anti-inflammatory drugs, occupies one of the leading places in the practice of doctors. The problem of treating these diseases is a clear example of the complexity of managing comorbid conditions. If we refer to the results of any clinical trials, the presence of comorbidity is often an exclusion criterion. [Sofronov V.G. 2021, SHekunova E.V., Kovaleva M.A. and b. 2020].

**The purpose of the study.** The purpose of this study is to study the changes in the muscle wall of the esophagus of white rats aged 3 to 6 months under the influence of 5 types of nonsteroidal anti-inflammatory drugs.

**Materials and methods.** Researches were conducted in accordance with the rules of humane treatment of animals regulated by the "Rules for conducting work using experimental animals" approved by the ethics committee of the Bukhara State Medical Institute named after Abu Ali Ibn Sina. (16.01.2018, No. 18).

White rats taken for the experiment were divided into 2 groups (n=100): I-group – (intact) control (n=50); Group II - white rats that received 5 different nonsteroidal anti-inflammatory drugs, paracetamol 15 mg/kg, aspirin 5 mg/kg, ibuprofen 6 mg/kg, dexamethasone 0.1 mg/kg, hydroxychloroquine sulfate 6.5 mg /kg (n=50). Doses of this drug were empirically calculated and administered intragastrically for 10 days in the form of a solution.

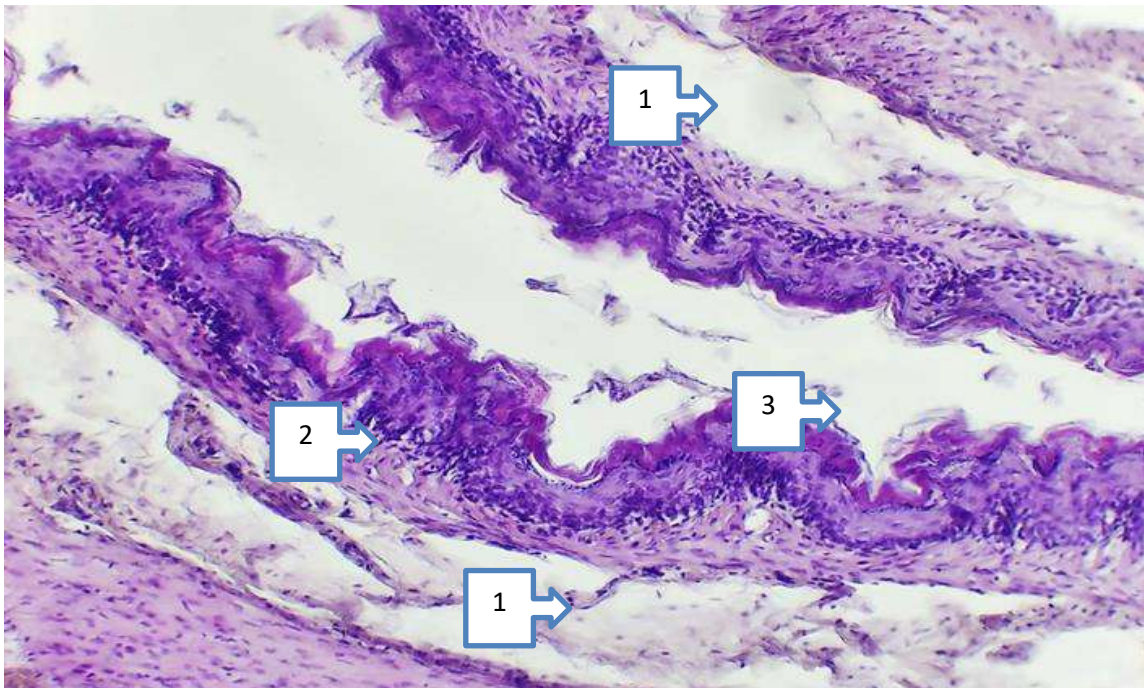
From the 141th day of development to the 150th day of development, 0.5 ml of distilled water was injected intragastrically through a metal probe to the control group of purebred rats for 10 days. During the examination, macroscopic and microscopic studies of 20 esophageal organs were performed based on macroscopic and microscopic studies of esophageal tissues. For general morphology, 1.5x1.5 cm of tissue was cut from each

esophagus, that is, from the upper, middle and lower parts, and frozen in 10% neutral formalin. After washing in running water for 2-4 hours, they were dehydrated in increasing concentrations of alcohol and xylene, then paraffin was poured and blocks were prepared. The next task was to cut paraffin slices 4-6  $\mu\text{m}$  thick on an MS-2 sled microtome, and the sections were stained with hematoxylin and eosin.

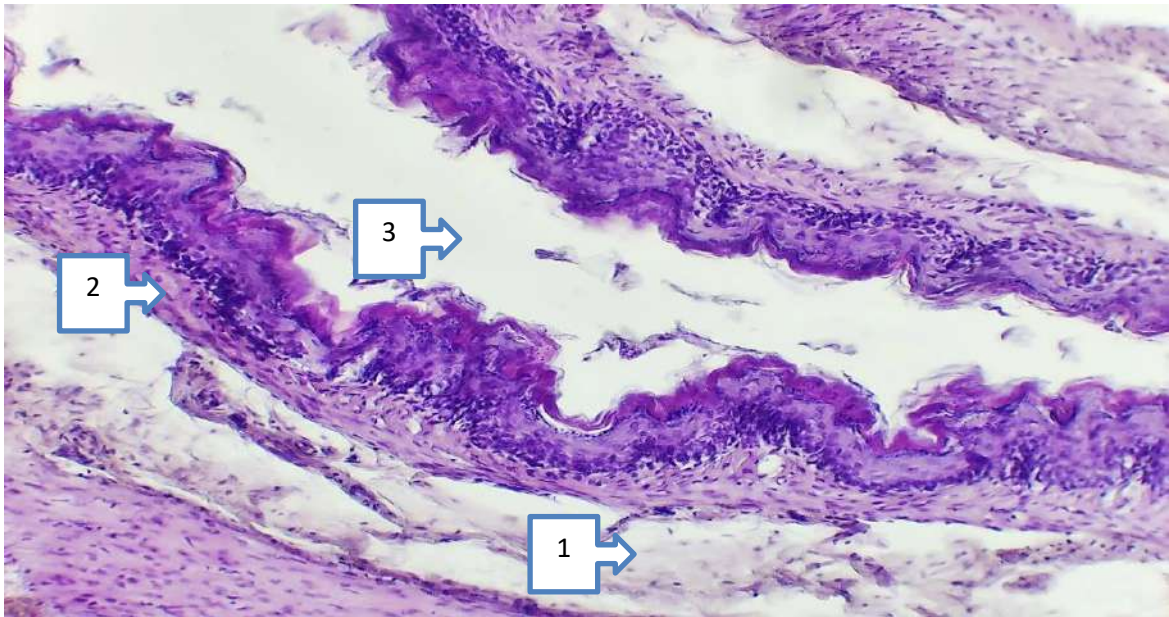
**Research results.** Macroscopic examination did not reveal pathological visible changes in the wall of the esophagus from the outside and inside. Table 1 below shows the morphometric changes of the esophagus.

**Table 1.**

Group I	Group II
Muscle plate (MP) 13.10	Muscle plate (MP) 15.2
Mucous layer (SS) 0.34	Mucous layer (SE) 0.49
Circular Floor (KK) 134.38	Circular Floor (SQ) 139.2
Muscle layer (MQ) 2.69	Muscle layer (MQ) 2.87
Longitudinal muscle layer (BQ) 118.45	Longitudinal muscle layer (BQ) 118.74
Muscle layer (MQ) 2.47	Muscle layer (MQ) 2.60



**Fig. 1.** Morphological changes of the wall of the esophagus in polypharmacy with 5 different NYAQDV. Enlargement of the wall, expansion of mucous and submucosal layers due to edema (1), lympho-leukocyte infiltration (2), desquamation of flat epithelium (3). Hematoxylin-eosin. Ob 20x20.



**Fig 2. Morphological changes of the wall of the esophagus in polypharmacy with 5 types of NYAQDV. Enlargement of the wall, expansion of mucous and submucosal layers due to edema (1), lympho-leukocyte infiltration (2), desquamation of flat epithelium (3). Dye hematoxylin-eosin. Ob 20x20.**

Microscopic examinations revealed hyperemia of the esophagus wall, swelling of muscle tissue, expansion of the submucosal layer, hyperplasia of cells, swelling of the mucous membrane, lymph-leukocyte infiltration, desquamation of the flat epithelium.

**Summary** The results obtained from the study of histological preparations of the esophageal wall of non-steroid white rats treated with anti-inflammatory drugs showed that, in contrast to the materials obtained from the control group, when viewed under a microscope, various pathological lesions of a morphological nature were observed. changes are visible. In this regard, the cause of these changes was considered to be the result of taking 5 different types of non-steroidal anti-inflammatory drugs in the laboratory animals participating in the experiments. In the group of non-white rats that received 5 different non-steroidal anti-inflammatory drugs, it was found that morphological changes occurred in the layers of the esophagus wall. These changes consisted of the following: hyperemia of the esophagus wall, swelling of muscle tissue, expansion of the submucosal layer, hyperplasia of cells, swelling of the mucous membrane, infiltration of lymph-leukocytes, desquamation of the flat epithelium.

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## РАСПРОСТРАНЕННОСТЬ И ЭПИДЕМИОЛОГИЯ РАКА ПРЕДСТАТЕЛЬНОЙ ЖЕЛЕЗЫ В БУХАРСКОЙ ОБЛАСТИ

*Тилавов Толибжон Бахтиёрович*

<https://orcid.org/0009-0008-0781-9285>

*Бухарский государственный медицинский институт*

**Аннотация.** В этой статье представлена информация о распространенности и эпидемиологии рака предстательной железы в Бухарской области. Данные взяты о контингенте больных злокачественных новообразований предстательной железы, состоящих