Table 1. Parameters of the tumor vascular bed

Vascular parameter	M	m	V.c.	Max	Min
Volume, %	4,33	0,25	0,46	12,6	1,2
Number in 1 mm^2 of the tumor	23,7	1,1	0,38	62,2	12,1
Length in 1 mm^3 of the tumor, mm	423,3	37,4	0,72	1354,0	25,4
Wall square in 1 mm^3 of the tumor, mm^2	14,5	1,22	0,7	77,0	2,2
Diameter 5-10 μm, %	16,2	2,17	0,29	100,0	0
Diameter 11-20 μm, %	43,4	1,25	0,47	58,8	0
Diameter 21-30 μm, %	27,3	0,95	1,16	40,8,	0
Diameter 31-50 μm, %	6,8	0,3	1,57	12,8	0
Diameter 51-100 μm, %	4,1	0,18	2,77	8,5	0
Diameter 101-200 μm, %	2,2	0,08	2,95	3,9	0

Therefore, the investigation of the vascular density on 1 mm^2 of the tumor, the ratio of their diameters, volume of vessels, the length and square of vascular walls in 1 mm^3 of tumor tissue showed in average the high level of blood supply in the primary tumor knot in the ovarian cancer, though in particular cases the parameter variations were significant.

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PRIMARY SCREENING OF PIPERIDINE SERIES NEW COMPOUNDS

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One of the search ways for new medicines is studying fusion compounds' pharmacological properties among various analogues of well known and widely applied in medicine substances. The piperidine derivatives are of great interest. They are the products of piperidine reduction and are of low toxicological concern as pyridine is a part of many natural complexes (vitamin PP, Vitamin B6, nicotine and others). We have carried out the investigations of new piperidine derivatives synthesized at the Institute of Chemical Sciences named after Berkutov A.B. under the guidance of Academician Praliyev K.D.. The spasmolysants' primary screening method used is a model of isolated organs. The investigation on small intestine is the most available and, in this connection, very popular method. For the experiment animals of one species, sex, age and body mass (±10%) are selected. The purpose of our work has become the study of biological potency and toxicity of a new piperidine derivatives' range obtained at the Institute of Chemical Sciences named after Berkutov A.B., the Department of Education and Science of Kazakhstan, under the guidance of a member of the National Academy of Sciences Praliyev K.D.. The antispasmodic activity was investigated on the rats' small intestine in conditions of calcium and acetylcholine spasm. The work was carried out on the device oriented to the work with isolated organs and manufactured by the Ugo Basile Company, Italy. The acute toxicity was defined by means of a single intraperitoneal introduction of the investigated preparation to white nondescript mice weighing 19-21 g. The evaluation was made according to the LD_{50} factor. 54 new compounds have been investigated. The research results testify to the presence of antispasmodic activity of the following compounds: NA-281, NA-291, NA-309, NA-310, NA-311, NA-315, NA-320, NA-321, NA-323; the compounds NA-280, NA-294, NA-309, NA-311 blocking calcium spasm and the rest ones – both kinds of spasm. The high antispasmodic activity of the NA-311 and NA-323 compounds, blocking both producing calcium and acetylcholine spasms and with it being of low toxicological concern (NA-311 - 220 mg/kg ± 33,33; NA-323 - 210 mg/kg ± 7,07; the toxicity of no-spa - 213,8 mg/kg ±22,61), should be noted.

Conclusions: the piperidine derivatives, being close analogues of the natural compound – pyridine, - are promising for a profound search and development of new low toxicological concern medicines on their basis.

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INVESTIGATION OF NEUROGENIC MECHANISM OF DYNAMIC-BEHAVIOURAL ACTIVITY OF BENDAZOL

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Bendazol (dibazol) – derivation of benzimidazole has been widely used in medical research since the second half of the 20th century. This preparation has direct myotropic effect, it serves as anticonvulsive, immunomodulatory, antiagregate, adaptogenic, actoprotector remedy, that's why it is used in therapy, rehabilitation, prophylaxis in practical medicine. However there is not enough information in scientific literature about toxicity of the preparation. In our previous works it was proved that bendazol can be regarded as little toxic. It was also established that safe therapeutic range of bendazol covers 2 levels (from 1,25 to 40 mg/kg), that as regarding to LD_{50} forms 62-64 c.u. Toxic range of the preparation (from 160 to 640 mg/kg) corresponds to 13-15 c.u. with domination of cholinergic trophotropic effect.

The aim of our work is to investigate possible mechanism of the influence of bendazol on cholinergic structures of the central nervous system.

The experiments were carried out on 60 male-rats with the mass of 200-220 gr. The animals were kept according to the rules and the experiments were carried out keeping the rules of the International Convention on the protection of the vertebrates (Strasburg, 1986).

To ascertain availability of cholinomimetic ingredient in mechanism of bendazol's activity, we investigated its influences on M- и H-cholinoreceptive structures and its ability to change the duration of nicotine tremor and arecoline hyperkinesis that is caused by administration of the typical cholinomimetics – nicotine and arecoline. In an hour after inserting pharmacological agents, that are being used while testing, the animals got bendazol intragastrically in dozes of 5 and 160 mg/kg. The group animals used as a control one got solvent (distilled water) intragastrically in appropriate dozes.

Experiment with arecoline showed that preliminary inserting bendazol to the rats in dozes of 5 and 160 mg/kg prolonged the latent period of hyperkinesis if the doze is 5 mg/kg but shortened its beginning if the doze is160 mg/kg. At the same time the duration of hyperkinesis reduced depending on the doze.

The main H- cholinergic activity of the medication was evaluated according to its influence on the nicotine tremor, convulsive activity and depression of the inspiratory center. It was established that bendazol reduces the beginning of the nicotine tremor, increases its duration twice, stimulates the inspiratory center and shows little influence on the convulsive activity if the doze is 5 mg/kg. On the contrary if the doze is 160 mg/kg, the latent period of the beginning of tremor reduces if its duration increases by 120 %, depression of the inspiratory center increases 1,4 times ($p \leq 0,05$) and doesn't influence on the convulsive activity.

Thus, according to the results of the pharmacological analysis with the help of substances that influence just on the activity of central cholinergic systems, we can suggest that bendazol possesses H-cholinomimetic activity with the dozes 5 and 160 mg/kg and M-cholinolilitic activity with the doze 160 mg/kg.

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LASER SILICON INTUBATION DACRYOCYSTORHINOSTOMY REOPERATIONS EFFICIENCY EVALUATION

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Topicality. Endoscopic and laser processing technologies in dacryocystitis surgery has been quickly developing since the beginning of the 90-s of the XX century. The specified technologies provided the practical application of endonasal (retrograde) and transcanalicular laser endoscopic dacryocystorhinostomy (TLED). In ophthalmosurgery the transcanalicular approach to the lacrimal sac has gained the greatest extension as its main advantages, compared to the traditional external approach, are the lack of cicatrix on skin, little traumatism and bleeding and also a more simple surgery technique. According to the integrated data of scientific literature the efficiency of primary TLED varies from 58 to 85% and the success of reoperations usually doesn't exceed 50%, the application of transient stenting at reoperations allowing achieving higher positive results.

The purpose of the work – is to study the efficiency of bi-canalicular silicon intubation application at repeated TLED.

Materials and methods. The bi-canalicular silicon intubation TLED reoperations' results