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For a wide audience of scientists and pharmaceutical and medicinal employees.

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MODERN PHARMACOTHERAPY OF GASTROESOPHAGEAL REFLUX DISEASE

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Introduction. Gastroesophageal reflux disease (GERD) is a chronic relapsing disease caused by a violation of the motor-evacuation function of the gastroesophageal zone characterized by spontaneous or regular recurrence in the esophagus of gastric or duodenal contents, which leads to damage to the distal esophagus with the development of erosive ulcerative, catarrhal and / or functional impairment. The worldwide organization of gastroenterologists recognized the GERD was the disease of the 21st century, which afflicts 20 to 50% of the population of different countries of the world.

Aim. Study of modern standards of medical care for patients with gastroesophagic reflux disease.

Materials and methods. We conducted an analysis of articles, an adapted clinical guidelines based on evidence, a unified clinical protocol for medical care to patients with GERD.

Results and discussion. The most common mechanism of acid reflux is the episodes of relaxation of the lower esophageal sphincter. Also, mechanisms include impaired tone of the lower esophageal sphincter due to increased intraabdominal pressure. Other factors include motility disorders of the stomach and duodenum, the presence of hernia of the esophagus of the diaphragm, decreased esophageal clearance (decreased motility of the esophagus, scleroderma, and decreased salivation). The basis of the pharmacotherapy of GERD is long-term acid-suppressive therapy with such drugs as proton pump inhibitors (PPI) (omeprazole, lansoprazole, pantoprazole, rabeprazole, and esomeprazole), H₂ receptor antagonists (ranitidine, famotidine), antacids (aluminum hydroxide and magnesium hydroxide, magaldrate, calcium carbonate and magnesium carbonate). Proven, that the most effective drugs for the treatment of patients with GERD are PPI. PPI therapy may be recommended according to the degree of reflux esophagitis. In the pharmacotherapy of GERD, step-up, step-down therapy and on-demand therapy are used. The ultimate goal of each treatment option is to have complete control of the symptoms of the disease.

Conclusion. Thus, we have studied and analyzed the current standards of medical care for GERD patients, which has proven that PPIs are the most effective drugs for treating patients with GERD. In the treatment of GERD, the search for an optimal combination of medicinal and non-medicated means is being sought.

MODERN PHARMACOTHERAPY OF GIARDIASIS

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Introduction. Giardiasis is infection with the flagellated protozoa microorganisms *Giardia duodenalis*. *Giardia* has a worldwide distribution, occurring in both temperate and tropical regions. It is considered the most frequently identified human protozoal enteropathogen. Prevalence rates vary from 4-42%. Prevalence rates of 15-20% in children younger than 10 years are common. In Ukraine annually 10-14 million people get sick on Giardiasis. 65% of the patients are children. WHO experts consider that Giardiasis the most common in the human population group of diseases in recent years, has a constant tendency to increase.

Aim. Study of modern standards of medical care for patients with Giardiasis.

Materials and methods. We conducted an analysis of articles, an adapted clinical guidelines based on evidence, a unified clinical protocol providing medical care to patients with Giardiasis.

Results and discussion. Symptoms of acute Giardiasis usually appear 1 to 14 days (average 7 days) after infection. They are usually mild and include epigastric ache, nausea, anorexia, diarrhea, allergy, weakness, and headache. To the diagnostic methods refer microscopic examination of stool, enzyme

immunoassay for antigen in stool, microscopy of the duodenal contents, and biopsy of the small intestine. The pharmacotherapy must be comprehensive and should cover all likely pathogens in the context of the clinical setting. Standard treatment for Giardiasis consists of anti-parasitic therapy. Antiprotozoic agent for systemic use of imidazole derivatives (metronidazole, tinidazole) may be recommended for symptomatic infections. Metronidazole and tinidazole should not be given to pregnant women. Anthelmintics benzimidazole derivatives (albendazole) may be used. Nitazoxanide is approved by the US Food and Drug Administration for the treatment of children and adults for diarrhea from Giardiasis. Aminoglycoside paromomycin can be used to treat for symptomatic infections in pregnant women.

Prevention methods include do not drink untreated water from shallow wells, lakes, rivers, springs, ponds, streams, or the ocean. Water can be decontaminated by boiling. Wash and/or peel all raw vegetables and fruits before eating. Daily rooms wet cleaning.

Conclusion. Thus, we studied and analyzed the current standards of care for patients with Giardiasis. For symptomatic infections, use tinidazole, metronidazole, or nitazoxanide.

DIURETIC ACTIVITY COMPLEX OF PHENOLIC COMPOUNDS FROM COWBERRY LEAVES

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Introduction. According to the Ministry of Health, today in Ukraine there are almost 12 million people with hypertension. Of these, only 14% receive systematic treatment, 35% receive periodic medications. Diuretics are the basic group of drugs for the treatment of patients with arterial hypertension, hypertensive crisis, etc. But the use of diuretics is often accompanied by side effects. Therefore, the current problem of pharmacology is the search for new, highly effective and safe medicines among medicinal plant raw materials. A group of plant diuretics has significant advantages in the form of a gradual increase in the diuretic effect and the lack of electrolyte loss. Among the plant diuretics, the cowberry are well received, which is widely used in folk medicine for the treatment and prevention of diseases of the urinary system.

Aim of the study was to investigate how complex of phenolic compounds affect diuresis in rats.

Materials and methods. The effect on diuresis in rats was studied by the method of Berkhin E.B. White nonlinear rats weighing 130-160 g were used. Six animals in the study groups and in the control group. In the study of diuretic action rats contained in a constant diet with free access to water. Before the start of experimental studies, rats were kept for 2 hours without food and water. Doses of 25, 50, 75, 100 mg/kg were studied in the form of fine water suspension which was introduced by a catheter into the stomach of animals. After 30 minutes, intra-gastric administration of tap water via special metal probe which was introduced at a rate of 3 ml per 100 g body weight of the animal. Urine was collected. Diuresis was assessed after 2 and 4 hours in ml and calculated into the percentage to the control. The content and care of the animals were in accordance with the provisions of the European Convention for the Protection of Vertebrate Animals used for experimental and other scientific purposes (Strasbourg, 1986).

Results and discussion. Complex of phenolic compounds appeared to have diuretic effect with has a tendency to dose-dependent effect; maximum diuretic effect was obtained using higher doses.

Conclusions. In the course of the experiment, a clear linear pattern of diuretic effect in phyto-extracts, which were complexes of glycosides of phenolic compounds, was discovered. Complex of phenolic compounds from cowberry leaves were investigated in doses 25, 50, 75, 100 mg/kg to see how they affect diuresis in rats. All the extracts have shown diuretic activity in various intensity. Consequently, therefore cowberry is a perspective plant for further pharmacological studies

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Збірка містить матеріали науково-практичної конференції молодих учених та студентів «Актуальні питання створення нових лікарських засобів». Матеріали згруповано за провідними напрямками науково-дослідної та навчальної роботи Національного фармацевтичного університету. Розглянуто теоретичні та практичні аспекти синтезу біологічно-активних сполук і створення на їх основі лікарських субстанцій; стандартизації ліків, фармацевтичного та хіміко-технологічного аналізу; вивчення рослинної сировини та створення фітопрепаратів; сучасної технології ліків та екстемпоральної рецептури; біотехнології у фармації; досягнень сучасної фармацевтичної мікробіології та імунології; доклінічних досліджень нових лікарських засобів; фармацевтичної опіки рецептурних та безрецептурних лікарських препаратів; доказової медицини; сучасної фармакотерапії, соціально-економічних досліджень у фармації, маркетингового менеджменту та фармакоеконіміки на етапах створення, реалізації та використання лікарських засобів; управління якістю у галузі створення, виробництва і обігу лікарських засобів; інформаційних технологій у фармації та медицині; основ педагогіки та психології; суспільствознавства; філології. Також у збірці опубліковані матеріали учасників Всеукраїнського конкурсу студентських наукових робіт зі спеціальності «Фармація, промислова фармація»

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