NONSTEROIDAL ANTI-INFLAMMATORY DRUGS WITH GASTROPROTECTIVE PROPERTIES

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Introduction. Nonsteroidal anti-inflammatory drugs (NSAIDs) are among the most popular drugs in the world and are used in the treatment of many inflammatory diseases. However, the use of NSAIDs limits the high incidence of adverse reactions from the gastrointestinal tract, especially the stomach. Creation of a new class of NSAIDs - selective inhibitors of cyclooxygenase 2 (COX-2) - did not solve the problem of gastotoxicity in patients with risk factors for this pathology, although it reduced the incidence of complications. At the same time, many COX-2 inhibitors have cardiovascular (CV) adverse events. An alternative approach is the use of nonclassical NSAIDs with gastroprotective properties.

Aim. Analyze the assortment of existing NSAIDs, the results of randomized clinical trials and preclinical studies, and identify new drugs with a non-classical mechanism of action

Results and discussion. Representative of this class of drugs is the precursor of tolmetine - Amtolmetinum guacyl (AMG). AMG belongs to the group cyclooxygenase inhibiting NO-donating drugs (CINODs). In the field of inflammation and tissue damage, NO can act as a mediator of pain, which causes sensitization and direct stimulation of nociceptors. In the gastrointestinal mucosa NO performs a protective function, enhancing blood flow, repair of epithelial cells, preventing the development of inflammation and blocking free radical processes.

Vanilloid receptors (TRPV1 and others) are the original "integrators" of pain sensitivity: They work both under the influence of specific ligands (vanilloid) and under the influence of a variety of nonspecific stimuli (acidosis, fever, ion imbalance). Due to the vanillin group in the molecule, AMG binds to vanilloid (capsaicin) receptors and causes the release of the CGRP protein (calcitonin gene related peptide, related to calcitonin) followed by a local increase in the production of nitric oxide (NO), which compensates for the effect of prostaglandin deficiency due to inhibition COX-1. Amtolmetinum guacyl also stimulates the release of bicarbonate, which is the basis of the alkaline buffer of gastric juice.

Conclusions. AMG has anti-inflammatory, analgesic, antipyretic and has a gastroprotective effect. The use of drugs with a similar mechanism of action makes it possible to increase the effectiveness and safety of pharmacotherapy of inflammatory diseases.

RACIAL/ETHNIC ASPECTS OF HYPERTENSION

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Introduction. The prevalence of arterial hypertension is higher in blacks than in other race/ethnic groups, with environmental and genetic risk factors playing an important role. In the United States African Americans develop hypertension at an earlier age than whites, have much higher average blood pressure readings, a greater likelihood of refractory hypertension, and greater rates of premature hypertensive complications. Such differences indicate the possibility of the existence of basic pathophysiological differences between the ethnic population, which caused changes in the recommendations for treatment.

Aim. Carry out an analytical review of hypertension development mechanisms and the most promising methods of its treatment in African Americans.

Materials and methods. Data analysis of literature and Internet sources.

Results and discussion. Pathogenesis of hypertension in African Americans is complex and includes the high incidence of obesity, salt sensitivity and the activation of the renin-angiotensin-aldosterone system (RAAS), endothelium vascular response. Besides African Americans are less likely to have a night time lowering of blood pressure, they have proteinuria earlier. Plasma renin activity in blacks