CLINICAL AND PHARMACEUTICAL ANALYSIS OF THE SAFETY OF THE USE OF IRON PREPARATIONS FOR ANEMIA IN PREGNANT WOMEN IN OBSTETRIC PRACTICE

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Introduction. Anaemia of pregnant women is an urgent problem in modern obstetric practice, which is due to the significant prevalence of this pathology. It is known that physiological hemodilution is inherent in the normal course of pregnancy, when the volume of blood increases by 1000 ml, and the volume of erythrocytes - only by 300 ml. In this regard, for a pregnant woman, the lower limit of the haemoglobin content of blood is 110 g/l. This indicator changes depending on the trimester and reaches a minimum at 34 weeks, and also drops to 100 g / l in the postpartum period. Anaemia in pregnant women is iron deficient in 90% of cases and is characterized by a violation of haemoglobin synthesis due to physiological and pathological processes. According to the WHO, the incidence of anaemia in pregnant women ranges from 34 to 82%. Treatment and prevention of anaemia should be carried out among pregnant women who are at high risk of its development and considered the factors contributing to the development of this extragenital pathology.

Purpose of the research to study the clinical and pharmaceutical features of the use of iron preparations used in the treatment of anaemia in pregnant women and to determine a safe algorithm for their use in obstetric practice.

Materials and methods. Data analysis of outpatient cards; questioning.

Obtained results. A clinical assessment was carried out in 45 pregnant women who were registered in the antenatal clinic of the Scientific and Production Medical Center of KhNMU and who had anaemia of pregnant women. Ferrous iron preparations were used for therapy: Sorbifer Durules and Gyno-Tardiferon. Due to the combined composition, they retain the concentration of iron in the blood serum longer and have fewer side reactions. As a result, 39 pregnant women showed a significant increase in the level of haemoglobin in the blood and an increase in the level of ferritin.

It should be noted that the prevention of side effects with the use of iron preparations must strictly adhere to the indications, dosage and duration of treatment with antianaemic drugs. The severity of anaemia in a pregnant woman and the presence of concomitant extragenital pathology should be considered as clinically significant. It is necessary to adhere to their rational use.

Conclusions. The conducted clinical and pharmaceutical analysis confirmed that ferrous iron preparations have high therapeutic efficacy and good tolerance with minimal adverse reactions, which makes it possible to recommend them from the point of view of evidence-based medicine standards for the treatment of anaemia in pregnant women.

REPARATIVE PROPERTIES OF GLUCOSAMINE DERIVATIVES IN COMBINATION WITH FLAVONOIDS

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Introduction. It is known that glucosamine is one of the structural elements of the connective tissue, which performs a variety of functions in the human body, including reparative process and

participates in the replacement of damaged tissues. The utilisation of glucosamine in the presence of a wound healing process, naturally, is intensified and there is no possibility to compensate for the arising glucosamine deficiency, especially at the wound site, due to features of the blood supply to this section, or the presence of glucosamine insufficiency syndrome. On the other hand, the reparative processes occurring in the wound can also slow down due to the development of inflammation and accompanying its exudative phenomena. As is known, glucosamine has not only plastic, but also anti-inflammatory properties. In addition, flavonoids included in the drug under study have anti-inflammatory, anti-seventive and antioxidant properties, as well as able to stimulate reparative processes.

Purpose of the research is to study the reparative properties of glucosamine derivatives in combination with a bioflavonoid quercetin.

Materials and methods. The study of reparative activity was carried out on the model of a standard scarified wound. In this study 30 rats, vistar lines, female, body mass 200.0 ± 20.0 g were used in the full accordance to the international guidelines for the experiments, involving animals and Ukrainian legislation. The wound was created by a standard scarifier with a diameter of 8 mm under a barbamyl anesthesia after preliminary depilation of the skin area. Rats were distributed to 5 groups of 6 animals in each as follows: 1 – Control group, in which saline was applied to the surface of the wound , 2 – in which "Levomekol" ointment was applied to the surface of the wound, 3 – the ointment containing 2% of the quercetin was applied on the surface of the wound, 4 – an ointment containing 2% of the glucosamine hydrochloride and 3% N-acetylgloglucosamine on the surface of the wound was applied, 5 – applied an ointment containing 2% of the quercetin, 2% of the hydrochloride glucosamine and 3% N-acetylglucosamine. The assessment of the wound-healing activitywas carried out by the planimetic method with measuring the Square of the for every second day of the experiment.

Obtained results. During this study, it was found that the healing rate of wounds in the second group was about 130% (129.5 ± 1.5%), if we take a wound healing rate in the first group for 100%. Under the same conditions, the rate of healing of wounds in other groups was: in the third group – 118.3 ± 0.6%, in the fourth group – 124.6 ± 1.2%, in the fifth group – 142.6 ± 1.43%. The term of wound healing was: in the first group, complete healing occurred by 18.7 ± 1.3 days, in the second group by 14.5 ± 0.5 days, in the third and fourth group by 15.4 ± 0.6 group and in Fifth group by 12.2 ± 0.3 days. Healing in all five groups occurred by primary tension with full epithelization. In the first group, one animal (16.7%) was observed the suppuration, which developed on the 3rd day of the experiment and independently disappeared by 10 days.

Conclusions. The data obtained during the study indicate the positive effect of the combination of glucosamine derivatives with flavonoids (quvercetin) on the course of the wound process, which is apparently due to the plastic functions of glucosamine and its derivatives in the human body on one side, as well as with anti-inflammatory, anti-acudative and reparative properties of flavonoids in general and, in particular, quercetin. Thus, it can be concluded that the study of the reparative properties of glucosamine derivatives in combination with the qvercetin flavonoid is promising and should lead to the creation of a new competitive medicinal product to improve reparative processes with anti-inflammatory properties.