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МЕДИЦИНА

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PSORIASIS AND HYPERTENSION:

FEATURES OF THE THIOL-DISULFIDE SYSTEM

In recent years, considerable attention has been paid to the comorbidity of psoriasis, among which the most frequent are: cardiovascular pathology, in the structure of which - arterial hypertension, affecting about 1/3 of patients with psoriasis.

At the end of the twentieth century, one of the leading links in a number of cardiovascular diseases was recognized by ED [1]. In experimental and clinical studies, the value of the endothelium is shown both in the development of MS and in the formation of most cardiovascular diseases [2].

There is evidence of hyperproduction of NO followed by activation of oxidative stress [3]. The cytokines that take part in this process increase the activity of sequestration of neutrophils in the microcirculatory channel. Vascular permeability is further enhanced by proteolytic enzymes with free radical oxygen compounds [4]. Cytokine signals spread the inflammatory process to other groups of endothelial cells, which leads to a deterioration of the course of both psoriasis and hypertension.

The prevalence of this comorbidity, the need for a polysystem approach in the disclosure of pathogenesis and optimization of therapy in this category of patients determined the relevance of our work.

Objective of the worke: to study the features of metabolism of nitric oxide and thiol-disulfide balance parameters in patients with psoriasis and combination with essential hypertension.

Group of examined persons and methods of research

The study of thiol-disulfide balance and nitrogen metabolism were performed in 95 patients who were divided into 3 groups: Group I – psoriasis and hypertension – 25 people; II group – patients with psoriasis only – 30 and Group III – patients with

hypertension only – 40 people. The overwhelming majority in the study groups were women. To assess psoriasis severity index used Psoriasis Area and Severity Index (PASI). The level of reduced and oxidized glutathione in plasma was evaluated with fluorometric then calculating their ratio [5].

Results of researches and their discussion

In patients with hypertension status change thiol-disulfide systems were fairly minimal compared to a group of patients with psoriasis only and comorbid disorders. During examination the patients with combined pathology of psoriasis and essential hypertension in the progressive phase of the disease revealed significant changes glutathione systems and free-radical oxidation, characterized by a significantly decrease in the content of reduced glutathione (16,5±0,48 mmol/l) and increased content of oxidized glutathione (3,23±0,06 mol/l), while reducing the activity of the enzyme superoxide dismutase (24,21±1,44 conventional units /mg protein/min) and reduction ratio of the recovered / oxidized glutathione to 5,1±0,26 conventional units. In patients with psoriasis with increasing severity of violations of thiol-disulfide balance recorded a significant deterioration in the clinical situation and reduced quality of life. These changes characterize the progression of endothelial dysfunction in these patients.

Conclusion

Formation of psoriasis progression was significantly associated with low functional capacity glutathione link of antioxidant system and with the inability to adequately replenish the pool of reduced glutathione.

Since oxidative stress arises not only when the redundancy of reactive oxygen forms, but also in the failure of the antioxidant system, the state of protective enzymes in the pathologically altered skin epidermis in the dynamics of the process and the pathogenesis of essential hypertension may be potential therapeutic targets.

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