

USE OF ANTIOXIDANTS IN PATIENTS WITH CHRONIC KIDNEY DISEASE STAGES 2-3

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INTRODUCTION AND AIMS: Oxidative injury plays an important role in the development and progression of chronic kidney disease (CKD). Therefore, the use of drugs with antioxidant properties is prospectively in patients with CKD. Today quercetin is one of the most powerful and effective anti-inflammatory, and antioxidant matters. The aim of the current study was to estimate influence of the per os form of antioxidant quercetin on rates of CKD progressing.

METHODS. We have examined 83 patients with CKD stage II-III (GFR 69 7,5 mL/min/1,73m²). All the patients had arterial hypertension, which was corrected with antihypertensive therapy. Quercetin was administered to 38 patients in addition to the basic treatment (1 group). 2 group was formed from 45 patients who received only basic treatment. Quercetin was prescribed at the doze of 120 mg per os during six month. The results of the treatment (changes of glomerular filtration rate (GFR)) were analyzed 12 months later. Additionally we analyzed frequency of hospitalization and Quality of life (QOL) in the investigated groups. QOL was rated by the Medical Outcomes Study Short Form 36-Item (SF-36). Data are presented as mean standard deviation at normal distribution or median (25:50 percentile) at not normal distribution.

RESULTS: The decline of GFR for a year presented in a 1 group from 68,8 6,6 mL/min/1,73m² to 66,4 5,9 mL/min/1,73m² (p<0,05); in 2 groups - from 69,9 7,9 mL/min/1,73m² to 64,1 7,3 mL/min/1,73m² (p<0,05). The decline of GFR was more expressed for patients, not getting quercetin. At the analysis of index of decrease GFR for year next results are got: in a 1 group decrease presented 2,1 (0,6:2,9) mL/min/1,73m², and in 2 group 5,4 (3,1:6,9) mL/min/1,73m² (p<0,001). A difference in the frequency of hospitalization was significant: 1 events (2,6%) in 1 group vs 9 events (20%) in 2 group (p<0,001). It was noted significant improving the quality of life in 1 group after six month: general health QOL increased from 70,7 11,6 to 79,2 12,8 (p<0,001), physical component summary – from 41,5 11,5 to 51,3 10,1 (p<0,001), mental component summary – from 35,1 10,3 to 40,4 9,8 (p<0,05)

CONCLUSIONS: Our data indicate that quercetin therapy has positive effects in comparison with the basic treatment on slacken speed of the progression of CKD patients and significant reduced frequency of hospitalization, improving the quality of life. The effects of antioxidants therapy particularly by quercetin and mechanisms of its influence on progress rates of CKD requires further study.

