

Abstract

Introduction: Thanks to modern medicine people with chronic forms of the diseases can live longer than before. In this work we concerned with last stage of chronical kidney disease, which is treated by dialysis or transplantation. Successful renal transplantation leads to significant improvement in quality of life of patients, but after transplantation there are still some risk factors, which may influence health and physical condition of men. We can eliminate these risk factors with some non-pharmacological ways, for example with intervention program of regular physical activity and special nutrition, which can help to gain and increase patient's physical condition.

The main focus of research of this thesis was to evaluate physical condition and amount of physical activity of 4 groups of patients, each with another intervention, after renal transplant. We used the battery of motor tests „Senior Fitness Test Manual“.

Aim: Analyze, how regular physical activity, special nutrition and combination of both influence physical condition of patients after renal transplant.

Methods: This research work is a part of the grant project IGA MZ CR 173 (NS-10518-3/2009). We used 21 participants selected from patients of Nephrology Clinic TC IKEM in Prague for our solution. Physical fitness testing was performed according to guidelines of the Senior Fitness Test battery and grip strength. We used also public inquiry to find out the amount of physical activity in normal day and a questionnaire, which evaluate activities of daily living – ADL. Initial testing was performed 1 month after transplant, control testing followed 3 months after and final testing next 3 months. The results were processed by descriptive statistics and statistical methods.

Results: At initial testing, prior to the intervention program, we found out that the patients (n= 18 out of 21) achieved results below the standards in the test evaluating aerobic capacity. Best results, i.e. normal and above normal, were achieved in the test, which evaluates dynamic strength of upper extremities. The output results of the tests remained equal, but the number of probands, whose results of the test for aerobic performance were below normal, was reduced to n=10, but n=7 of them within the zone „below normal“ improved. The best results, evaluating the intervention groups, during the first test (i.e. before beginning of intervention) achieved the group of patients, who were categorized to the motion programme(C). The worst results hit control group of patients without intervention, except for testing the flexibility of the

lower and upper extremities. During the final testing were the results equal as in the initial testing. The group of patients, who had motion and nutrition programme together, reached the best improvement in intra-group comparison. Unlike the group without intervention, which didn't reach significant improvement in the results of the physical testing.

Conclusions: The combination of physical and nutritional intervention significantly affects the physical condition of the patients. The aerobic fitness of patients within 3 months after kidney transplantation is reduced in comparison with healthy population. The test results improved very much during the first 4-5 months after transplantation, but in next months, we didn't see such great progress. The actual physical intervention has a positive effect on the physical condition of the patient, but not as great as we expected. We can not say, that the actual nutritional intervention had an insignificant effect on the physical condition of the patient.

Key words: physical fitness, physical activity, renal transplantation, the Senior Fitness Test, physical intervention, nutrition