

USE OF SPECIALIZED NUTRITIONAL SUPPLEMENTATION IN A DIALYSIS PATIENT WHO PRACTICES PHYSICAL ACTIVITY

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INTRODUCTION

The practice of physical exercises is recommended for patients with **Chronic Kidney Disease (CKD) undergoing dialysis**, to improve body composition and nutritional status. The nutritional status in these patients may be compromised due to the disease itself, as well as to the loss that occur in renal replacement therapy. In this context, **Oral Nutritional Supplementation (ONS)** is important to **replace the nutritional loss in this process**. It is a practice recommended by the ESPEN 2021 and KDOQI 2020 guidelines since the use of ONS in these patients has been associated with improved nutritional status, physical function and survival rates. There is still little literature on the practice of physical exercises among dialysis patients and its effects on body composition and nutritional status. **This case report addresses specialized oral nutritional therapy and individualized professional guidance in a dialysis patient who practices physical activity.**

METHODOLOGY

A 39-year-old male patient underwent preemptive kidney transplantation in 2014, with his maternal uncle as the donor. Patient had systemic arterial hypertension, chronic glomerulonephritis and chronic liver disease, with portal hypertension and gastric varices. He had a BMI of 22.6 kg/m², but with ascites ++, without lower limb edema. Patient had late vascular rejection of renal graft, which required renal replacement therapy in March 2019, 3 times a week on hemodiafiltration (HDF). Subjective Global Assessment (SGA) of 25 points, which indicated **moderate malnutrition**. At this time, **specialized ONS** started (HDmax – Prodiyet Medical Nutrition), containing 300 kcal, 13.4g of protein, 4g of fiber, vitamins and minerals, 3x a week after dialysis. During the period, he maintained good food acceptance and use of nutritional supplements without complaints. In July 2020, he started daily HDF dialysis, 2 hours, 6 times a week. In March 2021, the patient started functional training twice a week and unsupervised running at a volume of 18 km a week. He maintained the specialized post-dialysis ONS, with an additional pre-workout fast-absorbing carbohydrate and 30g of whey isolate post-workout. In October 2021, he presented in bioimpedance 15.2 kg/m² for fat free mass and 6.6 kg/m² for fat mass, with a phase angle of 5.69%. In March 2022, he started weight training with supervision 2 times a week and running at a volume of 51 km a week. Adjusted ONS specialized (300 kcal, 13.4g of protein, 4g of fiber, vitamins and minerals) for use in pre-workout 5 times per week; supplementation during workout of carbohydrate (20g), 1 capsule of salt (314mg) and 500ml of isotonic diluted at 50%; and post-workout supplementation with vegetable protein (23g), glutamine (5g) and creatine (3g). A total of 15.9Kg/m² of fat free mass, 6.2 kg/m² of fat mass and a phase angle of 6.08% were verified in bioimpedance.

RESULTS

In September 2022, the patient had an SGA of 8 points, which indicated adequacy. Estimated average food intake of 3,000 calories/day, 18% protein, 53% carbohydrates and 29% lipids. He maintained specialized pre-workout supplementation 6x/week and supplements during and post-workout. In bioimpedance, a phase angle of 6.57%, an increase in lean mass to 18Kg/m² and a reduction in fat mass to 4.6Kg/m².

CONCLUSION

The practice of physical exercises combined with adequate nutritional supplementation and professional guidance contributed to the **improvement of the nutritional status, reflecting in an improvement in the SGA score, an increase in muscle mass, a reduction in fat mass and an increase in phase angle.**

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DISCLOSURE

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