Muscle strengths and nutritional considerations after coronary bypass surgery in patients with diabetes mellitus and controls

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INTRODUCTION: Major invasive treatment, like cardiac surgery leads to muscle weakness, unintentional weight loss and increased nutritional risk.¹⁻³ The aim of our study was to assess these parameters in patients scheduled for cardiac rehabilitation after recent heart surgery, depending on the existence of diabetes mellitus.

PATIENTS AND METHODS: Prospective study that included patients with diabetes scheduled for rehabilitation within one month from surgical procedure, and control number of peers without diabetes. Assessment included anthropometric measurement, hand grip test (HGT), weight lost history (WLH) and standardized NRS-2002 screening tool.

RESULTS: There were 59 patients of the mean age 67.0 years, male to female ratio was 48:11 (81%:19%) respectively. Diabetes mellitus was present in 26 (44%). Diabetic vs. non diabetic had 28.7kg vs. 33.5kg for left hand HGT; 29.5kg vs. 38.0kg for right hand HGT; %WLH was 6.7% vs. 6.8%; and NRS-2002 was 3.6 vs. 3.4, respectively.

CONCLUSION: Both groups of patients expressed similarly pronounced nutritional risk after heart surgery, measured by mean %WLH and NRS-2002. However, a significant difference in strength of HGT implies that metabolic perturbations after surgery cause more severe muscle dysfunction in diabetics, in comparison with non-diabetics. This should be taken in to count for individualization of therapeutic approach in cardiovascular rehabilitation process.

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