Platform: Rapid 5 (PLR5)

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PLR5-2372

Room P

PLR5-2372 ROUX-EN-Y BARIATRIC SURGERY (RYGB) AND ITS EFFECT ON FUNCTIONAL CAPACITIES OF OBESE PATIENTS

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Background: Bariatric surgery is considered as the most common and efficient intervention in patients with obesity when standard weight loss treatment methods have failed. However, Roux-en-Y bariatric surgery (RYGB) in obese subjects leads to not only significant losses of fat but also to significant losses of lean and bone mass. These changes may increase the risk of falls and fragility fractures.
Post-surgery programs should thus offer physical activity interventions, which are essential for the success of weight loss while maintaining patients' lean and bone mass.
Several physical activity programs are currently on the market but without having previously assessed the effects of weight loss after bariatric surgery on obese patients' functional capacities. In order to design structured activity programs, it is important to understand better these effects.
Purpose: To investigate the effects of weight loss after bariatric surgery on obese patients' functional capacities.
Methods: We included a total of 20 consecutive obese patients, aged ≥ 18 years with a BMI ≥ 35 kg/m2 who attended the Service of Therapeutic Education for Obesity and Diabetes of the University Hospital of Geneva to undergo a bariatric surgery. We recorded clinical variables (age, gender, body weight, height, BMI, comorbidities and medication) which are routinely assessed at pre-surgery. In addition, we tested the following functional capacities (gait speed (GS) and stride length (SL) on flat surface and pebble stones using the Gait Up® system, dynamic balance with the functional reach test (FRT), walking capacity with the 6 minutes walking test (6MWT), lower limb strength with the 5 sit to stand test (5STS) and quality of life with the questionnaire IWQOL.The same variables were re-evaluated at 3 months post-surgery. Participants didn't follow any activity program during this time period.
Results: Participants (43.61±10.85 years old) lost on average 22.73±7.78 kg post RYGB. GS and SL increased significantly (p≤0.001) on both, flat surface (0.1±0.09 m/s; 0.07±0.10 m) and on pebble stones (0.14±0.11 m/s; 0.11±0.08 m). Patients also improved their walking distance during the 6MWT (48.89±43.61, p≤0.001) and reported a better quality of life (17.96±14.34, p≤0.001). However, FRT and 5STS failed to show a significant improvement (2.9±5.97 cm, p=0.055; -1.29±3.02 sec, p=0,087).
Conclusion(s): After bariatric surgery, participants' gait parameters (GS, SL), walking performance (6MWT) and quality of life improved whereas lower limb strength and balance performance remained unchanged. A specific strength and balance training might thus be beneficial to further enhance patient's functional capacity, physical activity level and quality of life.
Implications: Our results indicate that weight loss alone improves some functional capacities but that a targeted physical activity program might help to further enhance these parameters which are related to physical fitness. This might also help to maintain the weight loss. To develop and assess a specific activity program, functional capacities to be assessed in a standardized way should be defined. Further studies are needed to confirm our hypotheses and to follow up the long-term effect of RYGB on functional capacities.
Key-Words: Bariatric surgery, Obesity, Functional capacities
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