

## **MON-604: Conscious and Pre-Conscious Attentional Bias to Food in Patients Submitted to Bariatric Surgery**

Rogério Friedman. *Hospital de Clínicas de Porto Alegre*

Rogério Friedman, MD, PhD<sup>1</sup>, Mariana L D C Heredia, MSc<sup>1</sup>, Gibson Weydmann, MSc<sup>2</sup>.

<sup>1</sup>Hospital de Clínicas de Porto Alegre, UFRGS, Porto Alegre, Brazil, <sup>2</sup>Experimental Psychology (LPNec), UFRGS, Porto Alegre, Brazil.

Obesity is the result of a positive energy balance. Cognitive biases have been shown to co-occur with obesity, highlighting the hypothesis that certain cognitive functions increase the risk for obesity. Attentional bias (AB) to food stimuli is one of the cognitive components that seem to contribute to the onset and course of obesity. The treatment of obesity still represents a major health challenge. The most effective treatment for severe obesity is bariatric surgery (BS). Patients with higher degrees of adiposity – the so-called “superobese” (SO), whose body mass index (BMI) is  $\geq 50$  kg/m<sup>2</sup> - seem to lose more weight after BS than the non-SO patients. On the other hand, SO patients are more likely to regain weight. Differences in behavior and cognition before and after BS may explain weight regain differences. The aim of this study was to assess food AB in a sample (n = 59) submitted to Roux-en-Y gastric bypass (RYGB) and to compare food AB between the subjects who were SO before surgery, and those who were non-SO. 59 patients underwent anthropometric assessment, clinical interview, psychometric questionnaires, and AB behavioral assessment. Participants were mostly white (n = 46, 78%), had incomplete elementary school (n = 23, 39%), did not work (n = 31, 52.5%), and were in socioeconomic class C1 (n = 24, 40.7%). BMI before BS was  $49.70 \pm 1.25$  kg/m<sup>2</sup> (mean  $\pm$  S.D.). The last available BMI after surgery (assessed within 30 days from the assessments) was  $33.60 \pm 7.31$  kg/m<sup>2</sup>. The mean postoperative follow-up time at assessment was  $47.76 \pm 3.04$  months. Most participants were above the cutoff points for binge eating disorder (n = 54, 91.5%) and impulsivity (n = 45, 76.3%). The overall sample showed food AB ( $16.30 \pm 7.09$ ) when food stimuli were exposed during 2000 msec, suggesting a conscious attention towards food stimuli (t (58) = 2.303, p = .025, d = 0.29). SO and non-SO were compared using post-operative time as a covariate. Food AB was significantly higher in SO (24.06, SEM 8.55) than in non-SO (-12.98, SEM 8.11) when food stimuli were exhibited during 500 msec, indicating a pre-conscious attention to food stimuli in SO (F (2, 106) = 5.124, p = .008,  $\eta^2$ partial = .083). At 500 msec, AB value was significantly different from 0 only in SO (t = 2,763, p = .010, d = 0.53, n=27), indicating an AB to food stimuli when attention orientation was less possible. Overall, the food AB observed in the whole sample indicates that all patients show a conscious attention toward food stimuli after BS, which may influence weight maintenance. Notwithstanding, the result was different when SO and non-SO were compared, considering the post-operative time. The longer the time elapsed since surgery, the higher the food AB at 500 msec in SO. Given that SO patients have a higher risk of weight regain, these data suggest that a non-conscious AB after bariatric surgery may be one of the inductors of food ingestion, thus predisposing to weight regain.