

Effects of a 6-Month Caloric Restriction Induced-Weight Loss Program in Obese Postmenopausal Women with and without the Metabolic Syndrome: A MONET Study

Authors : Ahmed Ghachem, Denis Prud'homme, Rémi-Rabasa-Lhoret, M. Brochu

Abstract : Objective: To compare the effects of a CR on body composition, lipid profile and glucose homeostasis in obese postmenopausal women with and without MetS. Methods: Secondary analyses were performed on seventy-three inactive obese postmenopausal women (age: 57.7 ± 4.8 yrs; body mass index: 32.4 ± 4.6 kg/m²) who participated in the 6-month caloric restriction arm of a study of the Montreal-Ottawa New Emerging Team. The harmonized MetS definition was used to categorized participants with MetS [n = 20, 27.39%] and without MetS [n = 53, 72.61%]. Variables of interest were: body composition (DXA), body fat distribution (CT scan), glucose homeostasis at the fasting state and during a euglycemic/hyperinsulinemic clamp, fasting lipids and resting blood pressure. Results: By design, the MetS group had a worse cardiometabolic profile; while both groups were comparable for age. Fifty-five patients out of seventy-three displayed no change in MetS status after the intervention. Twelve participants out of twenty (or 60.0%) in the MetS group had no more MetS after weight loss (P= NS); while six participants out of fifty three (or 11.3%) in the other group developed the MetS after the intervention (P= NS). Overall, indices of body composition and body fat distribution improved significantly and similarly in both groups (P between 0.03 and 0.0001). Furthermore, with the exception of triglyceride levels and triglycerides/HDL-C ratio, which decrease significantly more in the MetS group (P \leq 0.05), no difference was observed between groups for the other variables of the cardiometabolic profile. Conclusion: Despite no overall significant effects on MetS, heterogeneous results were obtained in response to weight loss in the present study; with some improving the MetS while other displaying deteriorations. Further studies are needed in order to identify factors and phenotypes associated with positive and negative cardiometabolic responses to CR intervention.

Keywords : menopause, obesity, physical inactivity, metabolic syndrome, caloric restriction, weight loss

Conference Title : ICEPN 2017 : International Conference on Exercise Physiology and Nutrition

Conference Location : Tokyo, Japan

Conference Dates : May 28-29, 2017