

Conférence laurentienne de rhumatologie

Laurentian Conference of Rheumatology

Abstract #: 1

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Body Composition and Bone Health Among Sedentary Young Adults with and without Inflammatory Arthritis

Objective(s): Inflammatory arthritis (IA) is a chronic systemic inflammatory disease is associated with significant pain and disability. IA is also associated with an increased risk of bone loss and fracture. Bone loss in IA can result from the disease itself or glucocorticoid exposure and is often worsened by physical inactivity. The goal of this pilot investigation was to contrast body composition (BC) and bone mineral density (BMD) between sedentary young women with IA (n=7) and healthy sedentary age-, sex-, weight- and height-matched controls (n=21).

Method(s): Participants underwent a total body dual energy x-ray absorptiometry (DXA) scan to assess body composition. Percent body fat, visceral fat, total lean tissue mass, total bone mineral density, bone mineral density of the left femur, and bone mineral density of the L1-L4 vertebrae were measured.

Result(s): Participants with IA had a mean (SD) age of 20.7 (2.4) years, RA duration of 8 (4) years (range 1-13 yrs) and 43% (n=3) were currently taking hormonal contraception. Healthy controls had a mean age of 21.7 years (1.4) years and 71% (n=15) were currently taking hormonal contraception. Body composition and BMD parameters are shown in the table 1 below.

DXA revealed that the young women with IA had higher lower fat free mass, higher fat mass and especially visceral fat mass as compared to controls. BMD was better in the IA group and in the healthy range.

Conclusion(s): Initial results from this pilot investigation of young women with IA suggest they had less lean body mass, more body fat and higher levels of visceral fat. In contrast, BMD was similar to age and sex matched peers, despite an average disease duration of 8 years. These data suggest that regular, weight bearing, percussive exercise may offer important help to persons with RA in achieving a healthier body composition while simultaneously promoting bone health.
