Abstract

Introduction: Cycling has been associated with decreased bone mass during adolescence. Calcium (Ca) and vitamin D (VitD) intake are associated to bone mass and may be important confounders when studying bone mass. Aim: To clarify the effect that Ca and VitD may have on bone mass in adolescent cyclists. Methods: Bone mineral content (BMC) and density (BMD) of 39 male adolescents (20 cyclists) were measured. Ca and VitD intake were also registered. Different ANCOVA analyses were performed in order to evaluate the influence of Ca and VitD on BMC and BMD. Results: Cyclists showed lower values of BMC and BMD than controls at several sites and when adjusting by Ca, Wards triangle BMD appeared also to be lower in cyclists than controls. Conclusion: Nutritional aspects might partially explain differences regarding bone mass in adolescent cyclists and should be taken into account in bone mass analysis as important confounders.

Keywords