Comparison of Bone Mineral Density of Lumbar Spines between High Level Cyclists and Sedentary

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Abstract : The physical activities depending on the nature of the mechanical stresses they induce on bone sometimes have brought about different results. The purpose of this study was to compare bone mineral density (BMD) of the lumbar spine between the high-level cyclists and sedentary. Materials and Methods: In the present study, 73 cyclists senior (age: 25.81 ± 4.35 years; height: 179.66 ± 6.31 cm; weight: 71.55 ± 6.31 kg) and 32 sedentary subjects (age: 28.28 ± 4.52 years; height: 176.56 ± 6.2 cm; weight: 74.47 ± 8.35 kg) participated voluntarily. All cyclists belonged to the different teams from the International Cycling Union and they trained competitively for 10 years. BMD of the lumbar spine of the subjects was measured using DXA X-ray (Lunar). Descriptive statistics calculations were performed using computer software data processing (Statview 5, SAS Institute Inc. USA). The comparison of two independent distributions (BMD high level cyclists and sedentary) was made by the Student T Test standard. Probability 0.05 (p≤0 / 05) was adopted as significance. Results: The result of this study showed that the BMD values of the lumbar spine of sedentary subjects were significantly higher for all measured segments. Conclusion and Discussion: Cycling is firstly a common sport and on the other hand endurance sport. It is now accepted that weight bearing exercises have an osteogenic effect compared to non-weight bearing exercises. Thus, endurance sports such as cycling, compared to the activities imposing intense force in short time, seem not to really be osteogenic. Therefore, it can be concluded that cycling provides low stimulates osteogenic because of specific biomechanical forces of the sport and its lack of impact.
Keywords : BMD, lumbar spine, high level cyclist, cycling

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