Prevalence and Associated Factors of Severe Disease in an Athletic Population
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Introduction/Purpose: Sever disease is a common cause of pain in growing kids, but there is no consensus among researchers regarding its etiology. Recently several papers studied the role of sport on the physical and the psychological development of the child, including the possibility that these activities can cause overuse injuries in childhood. The purpose of the present study is to identify any association between heel pain due to calcaneal apophysitis and level of sport activity, type of sport, type of terrain, body mass index (BMI) and foot posture.

Methods: We studied 430 athletic children in a population-based sample of soccer (29.53%), basketball (48.37%) and volleyball (22.79%) players, aged between 6 and 14 years. Physical examination, Foot Posture Index (FPI), Oxford ankle and foot questionnaire Italian version for children and parents and a custom made questionnaire on sport were collected from each athlete. Diagnosis of Sever disease was made with a positive heel squeeze test.

Results: Our data showed that body mass index, sex, type of terrain, type of sport, FPI should not be considered risk factors for calcaneal apophysitis, while exists a statistical significant higher risk for younger age (p < 0.01), lower number of training session/week (p = 0.02) and shorter session (p < 0.01).

Conclusion: The prevalence of Severe disease in athletic children in the study sample was higher in younger and low active patients. BMI was not associated with an increased risk neither sport specialization. Investigating association between the type of terrain and Sever disease it does not appear to have a significant role. Analysis of the FPI produced no significant risk factors. The strengths of this study consists in a large population size, all participants underwent clinical assessment, and the use of a detailed, previously validated test, scales and questionnaire.