Achillodynia in long distance triathletes – a retrospective survey among 1158 female and male athletes

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INTRODUCTION:

In Austria, Bavaria and Switzerland about 14.000 athletes participate in long distance triathlon events every year. According to former published studies up to 90% of active triathletes suffer at least one injury during their career. The aim of our study was to identify risk factors concerning achillodynia (AD) in order to develop preventive and treatment concepts.

METHODS:

Our e-questionnaire - available in 5 languages - was sent to all members of the Austrian triathlon association and to participants of several Ironman events in Europe. 1158 athletes met our inclusion criteria and returned the questionnaire between July 2011 and February 2012. Chi square tests were applied to identify differences in risk factors between athletes with and without AD.

RESULTS:

Our study participants are composed of 85% male and 15% female athlets with a mean age of 41 years (SD=8.1 years) and from 43 countries. In our study, nearly 34% of the athletes described at least one event of pain affecting the Achilles tendon. 95.8% of all athletes suffering from AD did not have a significant trauma in their history. Based on this information the event of pain can be considered as an overuse injury. We found the following risk factors associated with AD in long distance triathletes: leg length discrepancy ($p=0.043$), excessive foot pronation ($p=0.023$), ankle joint instability ($p=0.036$); former injuries involving the Achilles tendon or calf muscles ($p=0.012$), inadequate footwear (0.009), excessive running load ($p=0.005$). The presence of a sports doctor or trainer ($p=0.03$) and sufficient recovery time between the training sessions ($p=0.015$) seem to be protective factors and show a negative association with AD.

CONCLUSION:

Due to the high percentage of overuse related tendon injuries in triathletes it is important to know the risk factors to develop sufficient preventive strategies and treatment concepts. Our results suggest that there seem to be a range of measures to prevent AD including appropriate training load, good footwear and professional care.