

Abstract: Effect of running retraining on pain, function and lower extremity biomechanics in female runners with ITBS

Background

Iliotibial band syndrome (ITBS) is a common overuse running injury which accounts for 22% of all lower extremity running injuries (Ellis, Hing and Reid 2007). Currently there is a limited body of knowledge regarding the mechanism of overuse running injuries, including ITBS, and the treatment thereof (Wen 2007).

Objective

The purpose of this study was to analyse the lower extremity kinematics of a female runner with ITBS and to apply this information to the intervention of running retraining with real-time feedback. It was questioned whether the intervention resulted in an improvement in the kinematics and reduced pain and / or improved functional ability of the subject.

Methods

A motion analysis assessment was performed on a single subject diagnosed with ITBS. The lower extremity kinematics of the subject was analysed to determine the excessive / faulty joint movement pattern thought to represent a biomechanical abnormality responsible for the symptoms of ITBS. Feedback of this angle was provided to the subject in real time while running on a treadmill during the intervention phase. The subject completed nine intervention sessions, during which the feedback was gradually removed. The outcome measures, which included motion analysis findings of lower extremity kinematics; pain on a verbal analogue scale while running on a treadmill and the lower extremity functional scale, were completed prior to commencing the study, during the intervention, after completion of the study and one month thereafter.