

Abstract

This bachelor's thesis describes the evaluation of the tennis groundstroke and the influence of postural stabilization on the resulting quality of activation of the trunk in the groundstroke. The theoretical part summarises the knowledge of the optimal performance of the forehand, as well as the method of evaluating the forehand. In the practical part of the bachelor's thesis, we qualitatively assessed postural stabilization of players according to the concept of DNS. We followed the process of qualitative movement diagnosis and we performed video analysis of the forehand from the Slow-motion recording. The specific parameters of the tennis groundstroke were objectified by using the program Tracker and Zepp Tennis 2 sensor, which gave us the values of angular displacement of the body segments, the angular velocity of hip and shoulder rotation, and the ball speed, the ball spin and the percentage success rate of impact location in the sweetspot of the racket. We made a table of qualitative movement that takes into account key features of the forehand, depending on each phase of the groundstroke. Then we made a complex evaluation of the player's forehand. We concluded that it is not possible to establish a uniform ideal angular alignment of body segments. It is always necessary to respect the player's individuality. Furthermore, we found that postural stabilisation of player affects the resulting quality of the individual's activity of the trunk and cannot be ignored in developing performance of the player.

Keywords

Tennis, forehand, biomechanics, kinematic chain, qualitative diagnosis of movement, video analysis, postural stabilisation