ABSTRACT

Title: Evaluation of selected parameters in American football players as possible causes of their injuries

Objectives: The aim of this thesis is, after studying selected theoretical backgrounds, to point out at the performance players of American football deliberately selected team to the possible causes of injuries (with special focus on the area knee joint) by evaluating body parameters, then selected three tests and at the same time by evaluating the screening of two positions in progress vertical jump.

Methods: To write down the diploma thesis, we mainly used knowledge and conclusions from a literature search of foreign articles and studies dealing with the issue of injuries, injury prevention, sports performance, and normative data. In the next step, testing of selected three tests and subsequent normative evaluation was performed. Screening was also important for the evaluation of two positions during the vertical jump.

Results: Through hand-picked performance tests, it was found that the selected players from the team achieved a sufficient level of movement based on the results according to standardized tables that we used. In comparison with professional players and the norm set out by Palmieri (2019), the players that we tested lag behind. As for the injuries in the selected group, the knee ligament injuries are predominated, which corresponds to the studied literature. The analysis of the two positions during the vertical jump achieved captured different movement patterns in the subjects. The most common problem was the medial deflection of the knees during the concentric phase after rebound. Only 2 tested players achieved asymmetry of the lower limbs over 10 %. Therefore, it is possible to expect the probable occurrence of knee injuries based on our tests, but also based on the physical parameters of the players.

Keywords: American football, Injury, performance tests, knee joint