

Abstract

Title: Analysis of the occurrence of hallux valgus in ice hockey players aged 12-15 years

Objectives: The main goal was to summarize the available facts about the occurrence of hallux valgus in hockey players and then quantitatively determine whether this diagnosis occurs more often in this group compared to the general population, already at the age of 12-15 years. Furthermore, the work tried to clarify the difference in occurrence between the individual posts of the group of hockey players.

Methods: 102 probands between the ages of 12 and 15 participated in the research, who were divided into 2 groups. The first group consisted of 36 ice hockey players. The second group consisted of 66 elementary school students who do not actively play ice hockey. Only men were tested for gender differences in the incidence of hallux valgus in the population. Before the actual testing, specific anamnestic information was taken from the participants: age, dominance of the limb, in the case of hockey players, a game post was added for a more detailed investigation. Both groups were measured in a similar way, i.e. with a goniometer from the dorsal side. The angle in the metacarpophalangeal joint of the first finger was measured, on both lower limbs. The resulting data were recorded and processed using the software program R (version 4.2.1) and the conclusions of the hypotheses are made at the 5% level of significance. The difference without distinguishing the dominant and non-dominant side, with its distinction, and with the distinction of the left and right side was checked. Furthermore, in the research group, the difference based on individual posts was investigated.

Results: A statistically significant higher incidence of hallux valgus was demonstrated in the group of hockey players compared to the group playing other or no sports. In a view without distinguishing between the dominant and non-dominant side, the angle in the hockey players was 2.28 degrees higher compared to the control group. When looking with the distinction of the left and right side, regardless of dominance, a statistically significant difference of 2.59 degrees was demonstrated for the research group on the right side compared to the control group. This difference was not observed on the left side. In the last row, it was possible to demonstrate a difference when on the non-dominant side, when the angle was again 3.48 degrees higher than in the control group. In testing depending on the playing position, a statistically significant difference was

determined between forwards and goalies, with the average between forwards and goalies being 5.72 degrees higher.

Keywords: ice hockey, hallux valgus, skates, hockey player