Abstract

The Effect of Hard Insole on Metatarsophalangeal Joint in Patients With Hallux Valgus

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The purpose of this study was to investigate the effect of donning of a hard insole in patients with hallux valgus. Fourteen subjects were selected from patients with foot pain at Lee Chang-Heon Foot Clinic from August 4, 2000 to September 15, 2000.

The hallux valgus angle and the first-second intermetatarsal angle were radiographically measured before and after donning the hard insole. Based on these two kinds of angles, a mild hallux valgus deformity group was characterized by the hallux valgus angle of less than 20 degrees, and a moderate hallux valgus deformity group was characterized by the hallux valgus angle of 20 to 40 degrees. After three weeks with the hard insole donned, the foot angles of the patients with hallux valgus were measured again. The data were analyzed by Wilcoxon signed ranks test, and the following results were obtained: 1) After the trial, both mild hallux valgus deformity group and moderate hallux valgus deformity group demonstrated that the hallux valgus angles were significantly decreased. 2) After the trial, mild hallux valgus deformity group demonstrated that the first-second intermetatarsal angle was significantly decreased. 3) After the trial, moderate hallux valgus deformity group demonstrated that the first-second intermetatarsal angle was not significantly decreased. The above findings revealed that according to donning hard insole, the hallux valgus angles of mild and moderate hallux valgus deformity groups and the first-second intermetatarsal angle of mild hallux valgus deformity group were significantly decreased. The results of this study have some limitation for generaliza-
tion due to the limited number of subjects.
Further studies are needed to evaluate the effect of hard insole on hallux valgus with more precise laboratory equipments and measurements in patients with hallux valgus.

Key Words: Hallux valgus; Hallux valgus angle; First-second intermetatarsal angle; Hard insole.