Comparison of Designed Slippers Splints with the Splints Available on the Market in the Treatment of Hallux Valgus

Mahdieh Ahmadi, Marzieh Rashidipour
Young Researchers Club, Khorramabad Branch, Student Islamic Azad University, Khorramabad, Iran

Abstract
Hallux valgus or the lateral deviation of the great toe is a complex disease. If it is not treated, it will cause the deviation of other toes. Hallux valgus is three times more common in females and may cause uncomfortable deformity of the foot, problems in putting on unsuitable and narrow toe box shoes, and pain on the medial side of the first metatarsophalangeal joint; therefore, patients seek medical services. Untreated hallux valgus may cause the hammer toe deformity of the second toe. In this cohort study, 30 patients referring to the Orthopedic Clinic of Shohada Ashayer Hospital of Khorramabad, Iran, with a complaint of hallux valgus were randomly divided into two groups. The splints designed by the researchers (slippers splints) were given to the case group, and the splints on the market including night splints and interdigital pads were given to the control group. The patients were followed every three months for a year and every time the weight bearing anteroposterior radiography of both feet were taken and hallux valgus and inter-metatarsal angles were measured. The data was analyzed by the SPSS software using repeated measure tests.

In the case group that used the designed splints regularly, hallux valgus angles decreased more dramatically than in the control group (P<0.001). This study showed that, despite controversies over the nonoperative treatment of hallux valgus, if hallux valgus angle in patient is mild to moderate, the splint can be used as a nonoperative treatment.

Keywords: Hallux valgus; Hallux; Splints; Therapy