

## ● 원문 Abstract

# The effect of smoking on the outcomes of lateral ankle ligament reconstruction

## Background

Although smoking is known to be harmful to the musculoskeletal system, no studies have investigated its effects on the outcomes of ankle ligament surgery. We determined the effects of smoking on the clinical and radiological outcomes of lateral ankle ligament reconstruction using tendon allografts according to smoking status.

## Methods

From among 105 patients with chronic ankle instability who were treated with anatomical reconstruction of the anterior talofibular ligament and the calcaneofibular ligament using semitendinosus tendon allografts and bio-tenodesis screws, 70 ankles, from 23 smokers and 47 non-smokers, were analyzed. Visual analog scale (VAS) pain scores, American Orthopedic Foot and Ankle Society ankle-hindfoot scores, Karlsson scores and complications were routinely determined at each follow-up visit. Anterior translation and the talar tilt angle on radiographic stress views were also assessed.

## Results

The mean follow-up period was 21.8 months (12-68 months). No significant differences were observed between the two groups with respect to age, gender, body mass index, or the duration of preoperative symptoms. The mean preoperative pain VAS scores were 5.8 and 5.3 among non-smokers and smokers, respectively. Postoperatively, the mean pain VAS score improved to 1.4 in both groups ( $p < 0.001$ ). Clinical and radiographic measures did not show significant changes according to the presence of smoking after surgery. However, two wound complications, 1 delayed healing and 1 superficial necrosis, occurred in non-smokers, whereas five, 2 delayed healing, 2 superficial infections and 1 superficial necrosis in smokers ( $p = 0.035$ ).

## Conclusion

The radiographic outcomes of smokers were comparable to those of non-smokers in the short term, whereas wound complications were more common in the smoker group.