Does Implantation of Verruca Plantaris into Abductor Hallucis Muscle Belly Prevent Recurrence?


Kent State University College of Podiatric Medicine

**Statement of Purpose**

The purpose of this study was to evaluate the effect of implantation of verruca plantaris lesions into the contralateral abductor hallucis muscle belly on recurrence of clinical verrucae.

**Methodology and Hypothesis**

A retrospective chart review of 43 patients with recalcitrant verruca plantaris was performed. Each patient underwent one of two procedures and the rate of recurrence of verruca plantaris lesions. Associations between recurrence of verruca plantaris and type of procedure, gender, history of diabetes, histology (normal, verruca vulgaris, verruca plantaris, and verruca planal), and location of verruca plantaris were statistically analyzed using a Fisher’s exact test with significance defined as p<0.05. Associations between recurrence of verruca plantaris and age and BMI were statistically analyzed using a logistic regression with significance defined as p<0.05. The procedure for verruca plantaris lesions was performed either by debridement or transplant, with the minimum post-operative follow-up of 10 months. It was hypothesized that implantation of the lesions would result in a decreased incidence of recurrence.

**Procedures**

On the contralateral foot, a 1.5 mm punch biopsy of the base of the lesion was performed to confirm the diagnosis of verruca plantaris. The biopsied lesion was placed into a sterile container of povidone-iodine solution for approximately three minutes to prepare the specimen for transplantation (Fig. 2). The lesion was removed, and a 3-5 cm stab incision was made parallel to the abductor hallucis muscle belly (Fig. 3). The muscle was approached via a distal anterolateral incision, and the lesion was transplanted into the abductor hallucis muscle belly via a non-weight bearing location via a subcutaneous tunnel. The transplanted specimen was secured to the fascia with a Vicryl sewing technique, and a sterile dry dressing was dressed on the incision site. The incision site was closed with a surgical knot.

**Results Continued**

- In 60% of the patients, no recurrence was observed during the follow-up period.
- In 36% of the patients, there was a recurrence of verruca plantaris that was asymptomatic and not requiring treatment.
- In 4% of the patients, there was a recurrence of verruca plantaris that was symptomatic and required treatment.

**Analysis and Discussion**

Based on our statistical analysis, our hypothesis is rejected. The results suggest that implantation of verruca plantaris lesions into the abductor hallucis muscle belly yields no significant difference in recurrence rates as compared to surgical removal. A prospective, randomized, controlled trial is necessary to confirm these results.

**References**