

# Minimally invasive treatment for papillae deficiencies in the esthetic zone: a pilot study.

Becker W, Gabitov I, Stepanov M, Kojs J, Smidt A, Becker BE.

## Abstract

### BACKGROUND:

The presence of papillary deficiencies adjacent to dental implants or teeth presents an esthetic concern for the dental team and patients.

### PURPOSE:

The aim of this pilot project is to evaluate a new method for reducing or eliminating small papillary deficiencies. The use of a commercially available gel was evaluated as a possible method for enhancing deficient papillae.

### MATERIALS AND METHODS:

Eleven patients, seven females and four males, with an average age of 55.8 years (ranging from 25 to 75 years) with 14 treated sites are included in this pilot study. Patients had a minimum of one papillary deficiency in the esthetic zone. Prior to treatment photographs were either taken at a 1:1 ratio or converted to a 1:1 ratio using a commercially available program. A standardization photographic device was not used. After administration of a local anesthetic, a 23-gauge needle was used to inject less than 0.2 mL of a commercially available and Food and Drug Administration-approved gel of hyaluronic acid 2-3 mm apical to the coronal tip of the involved papillae. Patients were seen every three weeks and treatment was repeated up to three times. Patients were followed from 6 to 25 months after initial gel application. A computer program measured changes in pixels between initial and final treatments. A formula was derived to determine percentage change in the negative space between initial and final examinations.

### RESULTS:

Each site was individually evaluated. Three implant sites and one site adjacent to a tooth had 100% improvement between treatment examinations. Seven sites improved from 94 to 97%, three sites improved from 76 to 88%, and one site adjacent to an implant had 57% improvement.

### CONCLUSION:

Results from this pilot study are encouraging and present evidence that small papillary deficiencies between implants and teeth can be enhanced by injection of a hyaluronic gel. Improvements were maintained for a range of 6 to 25 months.

### PMID:

19843105

[PubMed - indexed for MEDLINE]