

DentaKote™ Study

Summary

DentaKote™ is a proprietary formulation of polydimethylsiloxane (PDMS). The product has been used on dental patients for more than three decades. Prior to bringing the product to market by Dentity Global, LLC, a study was needed to establish its efficacy and viability.

Using a structured protocol in a clinical setting, all patients were screened for suitability. Selected patients became part of the clinical review. During the two-year assessment period, all patient data was captured and analyzed. Upon completion of the study, the data was reviewed. The findings concluded that every patient who had been given an application of DentaKote™ had remarkable results.

Understanding of PDMS

The original design purpose of this product was to provide a hydrophobic coating for dentures and partials. When applied correctly, the coating would reduce the incidence of microbiota colonization (biofilm). The reduction would lower the attachment of biofilm and thereby decrease the foul odors caused by bacteria and fungi.

Applications

During the study, DentaKote™ was applied directly on teeth and dental implant prosthetics. The number of patients included in the study were in excess of 300. The majority of cases were full arch dental implant cases both screw-down and cementable cases.

The range of cases included full arch hybrid & zirconia screw down, cementable, segmented implants, traditional crown and bridge prosthetics, dentures, partials, and flippers.

DentaKote™ was also tested on orthodontic aligners, night guards, snoring appliances, and Gelb appliances. It was also applied directly on natural teeth with and without braces.

Findings

During the study, patients were required to return every month for evaluation. During the third month, cases were removed to assess plaque and calculus levels. The cases were typically clean and had little to no plaque accumulation. The small amount that was found on cases was readily washed off under running water in the operatory sink. In some instances, the accumulation required minimal digital pressure to aid in the removal.

There were no cases that required harsh scrubbing or placing into the ultrasonic cleaner to remove accumulations. The same results were recorded with acrylic hybrid cases. Debris was readily removed with running water and digital swiping. No hard acrylic lab burs were needed to remove the attached calculus deposits as is often required.

Control Environment

In order to create a “control group,” DentaKote™ was used on hygiene patients. All patients selected had natural teeth. During the study, treatment was applied to only one side of the patient’s mouth. During the recall(s), observations were recorded to monitor the biofilm accumulation on both the treated side and the contralateral side.

Findings

The deposits on the “untreated” side were more tenacious in adherence as compared to the side where the product was applied. As the study progressed, the results in comparing the treated to untreated side demonstrated remarkable differences. It was observed that most patients had reduced plaque even one year after initial treatment. Patients had also noted during the study that home hygiene became easier and more effective.

Disclosure

Dr. Nilo Hernandez, who performed this study is a partner in Dentity Global, LLC, the exclusive provider of DentaKote™, and other dental products. The study was performed to determine the efficacy, feasibility, and viability of DentaKote™ before bringing the product to the dental community. The study performed by Dr. Hernandez was not influenced by his interest/participation in Dentity Global, LLC.