Fig1: Sample abstract for Case Report

Ventilation for Controlling Periimplant Skin Inflammation in Implant-retained Auricular Prostheses

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Introduction: Silicone auricular prostheses using extraoral implants have improved retention than adhesive-retained methods. The implants can be splinted together with a bar-clip (Dolder or Hader bar) whether additional attachments, or un-splinted with either magnetic attachments or locators. Peri-implant skin inflammation, partially due to the hot and moist environment around abutments, however, is commonly reported as a reversible complication of craniofacial implants. **Case description:** Two cases of prosthetic auricular rehabilitation – one was magnet-retained auricular prosthesis fabricated for a left partial auricular defect on a 65 year-old gentleman after trauma; another one was retained by the combination of Hader bar-clip and 2 ERAs (extracoronal resilient attachments) in a right microtia of a 24 year-old Thai male. Both had a problem with skin inflammation around abutments and prosthetic retention with their existing prostheses. Silicone prostheses were conventionally fabricated and fixed with metal substructure or magnet via acrylic resin housings, which contained attachments and was bonded with silicone using platinum primer. **Discussion:** The purpose of a tunnel design of acrylic resin housing is not only for preventing periimplant skin inflammation by increasing ventilation around abutments, but also improving the stability of prostheses by minimising prosthetic weight. In addition, removal of auricular prostheses from the extended arms of the acrylic resin housings, may reduce the bond failure between the acrylic resin and silicone prosthesis. **Conclusion:** This technique may help in the maintenance of periimplant skin conditions and improve the overall longevity of prostheses and craniofacial implants using different types of substructure.

Fig2: Sample abstract for Original Study

Micro-Additions of Carbon Nanotubes to Polymethylmethacrylate on Reduction in Polymerization Shrinkage

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Aim: The polymerization shrinkage that occurs with polymethylmethacrylate (PMMA) resins is well known and this study compares the polymerization shrinkage of denture base acrylic resin with and without micro-additions of carbon nanotubes. **Materials and Methods:** Two materials were used, PMMA resin and multi-walled carbon nanotubes. Four groups were established of 10 specimens each according to the weight percent of carbon nanotubes dispersed and disintegrated in the monomer: group I (0.5% of carbon nanotubes in monomer), II (0.25%), III (0.125%), and IV (control group, 0%). The polymerization shrinkage of acrylic resin for each group was evaluated based on the distance between reference points in wax (before polymerization) and in acrylic (after polymerization), measured using a traveling microscope. The data were submitted to Kruskal-Wallis and one way ANOVA for comparison among the groups, and the results were statistically analyzed. **Results:** The Kruskal-Wallis test detected that the different percentages of carbon nanotubes incorporated in the monomer showed significant differences, and the mean ranks of polymerization shrinkage (%) showed differences among all the groups (group IV = 0.126, III = 0.037, II = 0.017, I = 0.006). Hence, the order of severity of polymerization shrinkage was 0% > 0.125% > 0.25% > 0.5% for the amount of carbon nanotubes incorporated in methylmethacrylate. **Conclusion:** The present study was determined polymerization shrinkage in PMMA resins with micro-additions of carbon nanotubes. The results clearly show reduction in polymerization shrinkage when carbon nanotubes are incorporated into the PMMA resin.