Abstracts

Introduction: Patients with diabetes mellitus are more prone to develop candida infection. In such patients, the use of denture adhesive which is difficult to remove from the denture surface and oral mucosa is still questionable. The aim of the present randomized controlled crossover clinical study was to investigate the influence of paste and powder form of denture adhesives on the growth of candida albicans in denture wearing diabetic patients. The objectives of the study were to evaluate and compare the change in CFU/ml after the usage of denture adhesives.

Methodology: 20 participants with known diabetes were enrolled in the study after confirmatory HbA1C diagnostic test. They were randomly divided for the use of paste and powder forms of denture adhesives. Protocol A: Use of paste form of denture adhesive for 14 days followed by use of powder form of denture adhesive for another 14 days. Protocol B: Use of powder form of denture adhesive for 14 days followed by use of paste form of denture adhesive for another 14 days. Salivary samples were collected at three time intervals. Growth of candida albicans was assessed in the non-selective SDA medium after incubation for 48 hours.

Result: Intra-group comparisons by Wilcoxon Ranked sum test suggested no statistical significant change for paste form of adhesive (p=0.129) and powder form of adhesive (p=0.336). Inter group comparison also suggested no significant difference between two adhesives (p=0.473).

Conclusion: There was an insignificant increase in the numbers of salivary CFU/ml of candida albicans following the use of paste and powder form of denture adhesive in denture wearing diabetic patients.

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Efficacy of herbal products as denture cleansers - An in vitro study

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Introduction: AIM: The aim of the present study was to compare the efficacy of herbal products such as (Justica Adathoda (Adathoda), Aloe barbadensis (Aloe vera) , Phyllanthus Emblica (Amla), Punica Granulata (Pomegranate), Glycyrrhiza glabra (Athimathuram) at different concentrations.

Methodology: MATERIALS AND METHOD: The plant samples were collected, processed, dried and powdered. From the powdered samples plant extract was prepared at different concentration. They were the test group designated as Group A, B, C, D, E for each plant group and Group X for control group indicates commercial denture cleaner (Clinsodent) containing sodium perborate. Heat cure acrylic denture block specimens measuring 4cm x 2 cm x 2 mm were fabricated. Three standard microbial stains were used. Plant extracts were placed in petri dish over with bacterial culture were inoculated. Agar well diffusion method was used to evaluate the antimicrobial activity and zone of inhibition was measured. Based on the antimicrobial susceptibility testing, each plant extract was tested with artificial denture. Then the microbial coated denture specimens were placed in plant extract of different concentration and checked for microbial adhesion. Values were subjected to statistical analysis.

Result: Inhibitory activity of Justica Adathoda and Aloe vera were at 50 mg/ml whereas Phyllanthus Emblica, Punica Granatum, Glycyrrhiza Glabara were at 100mg/ml.

Conclusion: All the plant extracts showed Antimicrobial activity. Aloe vera had pleasant taste and high inhibitory effect. It is the best individual plant as denture cleansers

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Effects of different deprogramming devices on electromyographic activity of masseter and temporalis muscles: A crossover clinical study

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Introduction: The evidence of the effects of muscle deprogramming devices (MDDs) on the masseter and temporalis muscles have not yet been determined. The purpose of this crossover clinical study was to investigate and compare the effects of different MDDs on the muscle activity of masseter and temporalis muscles using surface electromyography (SEMG) in individuals with complete dentition.

Methodology: Thirty healthy participants were evaluated for the muscle activity of masseter and temporalis muscles of both sides by using the SEMG in the following clinical conditions: (A) Control - at the rest position of mandible without the use of the MDDs, (B) immediately after clenching without the use of the MDDs, (C) after deprogramming with the cotton roll deprogrammer for 30 minutes, (D) after deprogramming with the leaf gauge deprogrammer for 30 minutes, (E) after deprogramming with the lucia jig deprogrammer for 30 minutes, and (F) after deprogramming with the kois deprogrammer for 24 hours. Analysis of variance and the bonferroni post hoc test were used to perform statistical analyses.