Abstract:

Title: Evalution of effect of application of two mouthwashes on nickel release from dental alloys.

Introduction: In orthodontic treatment, the various alloys are widely used; these materials are placed in contact with the oral tissues for months or even years. The consumption of some foods and acidic drinks provides good conditions for corrosion of metals, and release elements such as nickel, chromium, copper and silver; therefore, this thesis was conducted to investigating the effect of two types of mouthwashes on the amount of nickel released from dental alloys.

Materials and Methods: In this semi-experimental study, 42 Nickel-chromium metal disks were investigated and Samples were immersed in Listerine and Oral-B mouthwashes for 48 hours, and Immersed solution was examined by inductively coupled *plasma* (ICP). The results were analyzed by Oneway ANOVA and Tukey post hoc test at 5% alpha level, after measuring the released nickel from dental alloys.

Results: The results of this study showed that, the lowest amount of nickel released; distilled water in the first place and Oral-B mouthwash in the second place and Listerine in the third place. Also the results showed that there is a significant difference in the amount of nickel released from casting dental alloys in Listerine and Oral-B mouthwashes and Oral-B mouthwash with distilled water and Listerine with distilled water.

Conclusion: According to this study, nickel ions released from Oral-B and Listerine mouthwashes, less than the recommended daily intake by the World Health Organization. Therefore, the use of these mouthwashes is recommended.

Keywords: Mouthwashes, Nickel Released, Dental Alloys.