

The effectiveness of using digital scanning method for reducing iatrogenic damage to the adjent teeth surfaces during class II cavity preparations

Hikmet SOLAK*, Gözde AKSOY **, Aziz ÇALIŞKAN**

*Eastern Mediterranean University, Turkey

**Near East University, TRNC Cyprus



Abstract

To evaluate the effectiveness of digital scanning methods in dental education to reduce the rate of damage to the adjent teeth in CL II cavity preparations.

Materials and Methods: As a part of cavity preparation lecture ; after teaching them how to open cavities without any deformation to the adjent teeth ; 245 Dental students were asked to prepare classical Class II cavity preparations both in maxiller and mandibular first molars in phantom models. Mesio-occlusal class II cavities for maxiller first molar-16 were performed and disto-occlusal CI II cavities performed for mandibular 1 molar-36. All adjent phantom teeth surfaces were examined using visual examination then randomly 50 phantom models were selected and all adjent phantom teeth surfaces of that selected group were examined using 3D digital scanning methods. Examination of teeth surfaces were done by calibrated individual examiners in all groups. After examination, 50 selected performance owners were informed about their Iatrogenic damages. All 245 dental students were taken under a course again to teach them how to reduce iatrogenic damages for class II cavity preparations. The same procedures were repeated and students were asked to do same the work with the same teeth. Damages were scored as 0= no damage, 1= abrasion 2= injury <50% of surface, 3= injury > 50% of surface.

Results: A rate of nearly 27 % less damage was found to the adjent teeth with the group that was shown their mistakes by digital scanning methods. After 2 courses, we still obtained iatrogenic damages.

Conclusion: According to our results of damage to the adjent teeth in CL II cavity preparations, additional teaching of protection of these surfaces is needed to reduce the rate. Also, the use of 3D scanning methods seems to be helpfull for us to obtain more successful results from cavity preparation teaching without the iatrogenic damages of adjent teeth.



Biography:

Hikmet SOLAK has completed his PhD in Ankara University, Faculty of Dentistry in 1985 He became Professor in 2002. In 2007 he joined Near East University as a Founder of Faculty of Dentistry. In 2019 he joined to Eastern Mediterranean University Faculty . He currently working as Professor of Restorative Dentistry Department in Eastern Mediterranean University He has various published more than 60 papers in reputed journals and has been serving as an Chief editorial board member of repute. He is also Chief and member of Turkish Fishing Organization, and member of Turkish Dental Tourism Organization

Speaker Publications:

- 1."Linear regression modeling to compare fluoride release profiles of various restorative materials", Dental Materials/ Vol 23 issue 9:1057-65
- 2." Rate of individuals with tooth development anomalies in the adult population admitting to dental faculty in the Northern Cyprus Turkish Republic", Gulhane Medical Journal/Vol 53 issue 3:154-161
- 3." Adults oral health status of Lapta district in Turkish Republic of Northern Cyprus", Journal of Marmara University Institute of Health Sciences/August 31, 2020
4. "Farklı uygulama basamaklarında oluşan tükürük kontaminasyonunun 3 adeziv sistemin dentine bağlanma dayanımlarına etkisinin incelenmesi", Cumhuriyet Dental Journal/ Vol 17 issue 3:256-266

5.” The pH changes of four different calcium hydroxide mixtures used for intracanal medication”, Journal of Oral Rehabilitation/ vol 30 issue 4:436 – 439

[25th International Conference on Dental Education](#) July 20-21, 2020 Webinar

Abstract Citation:

Hikmet SOLAK, The Effectiveness Of Using Digital Scanning Method For Reducing Iatrogenic Damage To The Adjent Teeth Surfaces During Class II Cavity Preparations , Dental Education 2020, 25th International Conference on Dental Education, July 20-21, 2020 Webinar

(<https://dentaleducation.dentalcongress.com/abstract/2020/the-effectiveness-of-using-digital-scanning-method-for-reducing-iatrogenic-damage-to-the-adjent-teeth-surfaces-during-class-ii-cavity-preparations>)