

Determination of agreement between Diagnodent laser and bitewing radiograph in diagnosis of dental caries among patients referred to the dental clinic of Guilan university of medical sciences.

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Aim: The aim of this study is agreement of Diagnodent laser with conventional bitewing radiography in diagnosis of dental caries.

Materiel & methods: The present study is a descriptive study. In this study, 256 teeth including 512 proximal surfaces (mesial and distal) from mesial portion of tooth No 4 to distal portion of 7 in each quadrant were evaluated by dental radiography. Then for the evaluation of the diagnostic value of Diagnodent device, the teeth surface should be cleaned and dried, then conical light probe is used in interproximal area. At first we set the device on zero, the device is calibrated with the healthiest surface of teeth; then interproximal surfaces scanned with the probe of light. The numbers of 0-7 indicate caries free, of 7-14 indicate incipient caries, and of 14-29 indicate dentinal caries and the numbers above 25 are indicative of severe caries. After gathering this information and data from evaluation of bite wing radiographs, the statistical analysis in SPSS software by using Kappa index, sensitivity and specificity indices were done

Results: Sensivity, specifity and kappa index of Diagnodent laser in compairson with radiography were 54.3% , 88.3% and 45%.

Conclusion: The agreement level of Diagnodent laser and bitewing radiography was relatively low, so the laser of Diagnodent cannot be introduced as an alternative method for bitewing radiograph. It seems that these two methods are very useful together as complementary methods