عنوان مقاله:

Evaluation of Diagnodent Accuracy in Detecting Approximal Caries in Primary Molars

محل انتشار:

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خلاصه مقاله:

Introduction: Detection of caries lesions on approximal surfaces of posterior teeth is difficult, since wide contact points hamper direct visual inspection. Due to the importance of the early detection of dental caries, the aim of this study is to compare the performance of different methods (visual, bitewing radiography and DIAGNOdent) in detecting approximal caries in primary molars. Methods: Thirty six children were selected from patients referred to the pediatric dentistry department of Shahid Sadoughi University of Medical Sciences, Yazd, Iran. Two examiners evaluated 229 approximal surfaces of primary molars using: visual inspection, radiography and a pen-type laser fluorescence device (DIAGNOdent) for the presence of proximal caries. The surfaces were evaluated by 2 other examiners for the presence of white spots or cavitations. Sensitivity, specificity and accuracy (percentage of correct diagnosis) were calculated for each method. The area under the receiver-operating characteristics curve (A z) was calculated for DIAGNOdent device. The inter-examiner reproducibility was calculated using the intra-class correlation coefficient (ICC values) for laser Fluorescence and agreement coefficient for visual and radiographic methods.Results: At white-spot threshold, a DIAGNOdent device presented better performance. At cavitation threshold the radiographic method demonstrated higher sensitivity than visual inspection and DIAGNOdent device .In this threshold, all methods presented high specificities Conclusions: A DIAGNOdent device performs better in white spot threshold. However, radiography shows better performance in detecting more advanced approximal caries lesions.

کلمات کلیدی:

Laser Fluorescence, DIAGNOdent, Proximal Caries, Radiography

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