



▼ POST GRADUATES ABSTRACTS

PG - 64 : EVALUATION OF RELIABILITY AND VALIDITY OF OCCLUSAL CARIES DETECTION BY DIRECT VISUAL, INDIRECT VISUAL AND FLUORESCENCE CAMERA USING ICDAS II (CODE 0,1,2) – AN IN VIVO STUDY

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Introduction: Early detection of carious lesions paves way to preservation of tooth structures by remineralization strategies. Visual examination using ICDAS II has been validated with gold standard of histological classification. Fluorescence camera is yet another diagnostic aid for early detection of carious lesion based on the auto fluorescence of the enamel and dentin. This study was done to evaluate the validity of the fluorescence camera (Soprocure, Acteone) in detecting the early carious lesion.

Material & Methods: 690 occlusal surface of non-cavitated premolars and molars were examined by Examiner 1 & 2 trained in ICDAS II grading system. The photographs of the occlusal surface and the fluorescence images, which was taken using Soprocure (Acetone) intraoral camera were examined by Examiner 3 & 4. The scoring were tabulated and correlated.

Results: The kappa values for, inter examiner reproducibility of indirect visual was 0.841 (good)

and his and fluorescence camera was 1.00 which is very good. The correlation analysis revealed that there was higher correlation between direct visual and indirect visual for both the examiners when compared to direct and fluorescence camera. There was a positive relationship between indirect visual and fluorescence camera for both the experimenter. Indirect visual method for detection of carries has high sensitivity and specificity irrespective of the examiner. Examination by fluorescence camera has a low sensitivity and high specificity.

Conclusion: The specificity of the caries detection method by indirect visual examination based on ICDAS II coding that of Soprocure fluorescence camera were consistent and reliable where as indirect visual examination had a high sensitivity for detecting ICDAS code 1,2. Soprocure showed a very low sensitivity in detecting ICDAS code 1,2 lesions.