

Utility of Intra-Oral Film Placing Tag in Imaging Intra-Oral Periapical Region of Posterior Teeth

R. H. C. Madhuranga^{1*}, L. S. Pathirage¹, W. P. V. Rangana¹, R. D. Jayasinghe²

¹*Department of Radiography /Radiotherapy, Faculty of Allied Health Sciences*

²*Department of Oral Medicine and Periodontology Faculty of Dental Sciences
University of Peradeniya, Peradeniya, Sri Lanka.*

*chinthakamadhuranga@gmail.com

Imaging of posterior teeth is difficult to achieve using current intra-oral or extra oral film holding equipment and conventional Bisecting Angle Technique (BAT) due to various reasons. As well as sometimes the quality of radiographic images are not sufficient for diagnostic purposes. To evaluate the utility of intra-oral film placing tag developed by us for imaging the periapical regions of posterior teeth, comparing with the conventional method. The study subjects included 60 patients in the age group of 15-35 years. The subjects were further subdivided according to conventional method and new method (with Intra-Oral Film Placing Tag), those patients were examined with 30 in each. Imaging was done using Bisecting Angle Technique (BAT). Time taken for each procedure was measured using the stopwatch. The entire study was done by same radiographer and setting. After each procedure clear photographs of each X-ray image was taken and randomly evaluated using quality assessment tool by two experienced dentists and radiographers. The evaluation results and time taken for each procedure was documented on an evaluation results analysis form. Chi- square test and two-sample T-test were used to analyze data. The overall results of the “distortion” and “proper inclusion of the region of interest” indicated significant difference between new and conventional method (p-value < 0.05). Overall results indicated statistically no significant difference with regards to “Elongation” and “Foreshortening” (p-value > 0.05). The results indicated that the mean time taken for the process is significantly different between conventional method and new method (p-value < 0.05, 95% CI= -33.63, -19.84). Time taken for new method is 19.84 to 33.63 seconds less than the time taken for the conventional method. This Intra-Oral Film Placing Tag (IOFPT) can be used to increase the diagnostic quality of the IOPA radiograph of posterior teeth. It reduces the time taken to the procedure and makes it more convenient. Also it is a useful supplementary aid to clinical practice.

Key words: Intra-Oral Film Placing Tag, Bisecting Angle Technique, Distortion, Elongation, Foreshortening.