

## **A comparison of clinical and radiographic caries diagnosis on posterior teeth of children seen at a Nigerian Teaching Hospital.**

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### **Summary**

Early detection and initiation of therapy for dental caries is the most effective means of ensuring resolution of the condition and its sequelae. The aim of this study was to compare the effectiveness of clinical and radiographic (using bitewing radiograph) methods of caries diagnosis in children. The subjects were 172 children within the age range of 5-12 years attending the Paedodontic Clinic of the University College Hospital for the first time. They were clinically examined for the presence of dental caries using the WHO criteria. Left and right bitewing radiographs were taken following the clinical examination to detect dental caries. Clinical examination found additional 4 occlusal caries (incipient caries) that were not diagnosed radiographically and radiographic examination revealed additional 20 approximal surface caries that were not evident clinically in deciduous teeth. In permanent teeth, 3 additional occlusal caries were diagnosed clinically while only one additional approximal caries was diagnosed radiographically. These observations revealed the additional diagnostic value of bitewing radiograph in the diagnosis of approximal caries in children and the importance of clinical examinations in diagnosis of early occlusal caries (incipient caries) which are difficult to see on dental radiographs. In view of these findings, the use of bitewing radiographs combined with careful clinical examination will be of great advantage in early detection of caries in children.

**Keywords:** *Dental caries, diagnosis, bitewing radiography.*

### **Résumé**

La détection précoce et l'initiation de la thérapie des caries dentaires est l'un des moyens le plus efficace pour assurer la résolution de la condition et des séquelles. Le but de cette étude était de comparer les efficacités cliniques et radiographique des méthodes de diagnostic des caries chez les enfants. 172 enfants dans l'âge de 5-12 ans participant a la clinique pedodontique du centre Universitaire hospitalier d Ibadan; Nigeria pour la premier fois. Ils étaient examinés cliniquement utilisant es critères de l'OMS. La radiographie gauche et droite étaient prises pour analyser clinique de la présence des caries dentaires. L'examen montraient 4 cas de caries occlusales non diagnostiques par la radiographie et l examen radiographique révélaient 20 cas de surface a caries sans aucune évidence sur les dents. Sur les dents de sagesse, 3 caries occlusales additionnelles étaient diagnostiquées cliniquement pendant que une seule carie approximable additionnelle était diagnostique radiophicallement. Ces observations ont révélées la valeur diagnostique additionnelle de radiographies pendant le diagnostis descarieschezles enfants et l'importance des examinations cliniques en diagnostic des caries occlusales précoce qui sont difficiles a détecter par radiographie dentaire. En vue de ces recherches, l'utilisation des radiographes combinés avec des examinations cliniques soigneux seraient d un grand avantage dans la détection précoce de caries chez les enfants.

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