MANAGEMENT OF QUESTIONABLE CARIOUS FISSURE IN A YOUNG PERMANENT TOOTH A REVIEW

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INTRODUCTION

Dentistry, since the time of G.V. Black, has undergone a lot of metamorphosis. Although the basic approach towards an established carious lesion is its complete removal and restoration with a biologically and mechanically compatible material, the current approach is to attack caries early and conservatively in a manner which is least invasive. This trend has developed from gradual advances in the field of biomaterials that has led to modifications in the design of cavities. Besides, introduction of several non - invasive diagnostic aids have made it possible to diagnose caries in its initial stage when it has a reversible potential. Last and not the least, law and litigation and consumer protection acts have made several dentists to avoid overtreating patients (Bales 1992).[1]

Currently, there is an ever increasing concern about the consequence for dental practice and research on the inability to reliably and validly diagnose dental caries.

Several studies in the last decade (Lavin 1983,[2] Millman 1984[3]) have suggested a change in the appearance of occlusal caries in children, posing extreme difficulty in the diagnosis. The teeth may appear sound but exhibit radiolucency under the occlusal surface enamel when observed in radiographs. This had been suggested to be a new and growing phenomenon resulting from the fluoridation of oral environment by various means, especially fluoride dentifrices. Fluoride dentifrices became popular in the late 1960's with its increased use after 1978.

An interesting study by Sawle and Andlaw (1988)[4] compared occusal caries in children examined in 1974 and another group in 1982. The samples were studied longitudinally over a period of 3 years and FDI criteria were followed for clinical examination followed by bitewing X-rays of the same teeth.

This study reported that the proportion of clinically undetected occlusal caries increased in the study done in 1982 in spite of the criteria and the examiner remaining unchanged.

The earlier sample did not have much fluoride exposure via toothpastes unlike the later sample for whom fluoridated toothpastes were freely available. Thus it is possible that fluoride maintains the integrity of the enamel that overlies the dentinal lesions which makes clinical diagnosis of caries difficult. Radiographic examination of both the samples showed radiolucencies in 3.2% of the population suggesting that fluoride has no effect on the deeper portion of the carious lesion.

Thus, now a days, with the advent of fluoridation, occlusal caries is likely to be masked by an intact appearing surface and hence, additional attention is necessary to diagnose and manage this condition.