

THE VALIDITY OF A CARIES DETECTING DYE IN IDENTIFYING CARIOUS DENTIN IN PRIMARY TEETH

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ABSTRACT

Treating carious dentin requires removal of infected layers of dentin. An accurate method for identifying both affected and infected dentin is required as in many occasions too much tooth structure is removed leading to weakening of the tooth and more often pulp exposure. The aim of this study was to evaluate the reliability and efficiency of a caries detecting dye in identifying different layers of carious dentin both histologically and bacteriologically compared to the conventional methods of caries removal.

The study was carried out in two parts. The first part was a histological study where 20 extracted human primary teeth with dentin caries not involving the pulp, were cleaned and prepared using the traditional method in 10 teeth (control) and using the caries detecting .dye in the other 10 teeth. Teeth were then decalcified, stained and examined microscopically. The second part included 30 teeth on patients where an initial bacterial sample was obtained. Dentin caries was removed conventionally and when cavity was judged clinically as clean a second sample was obtained. Dentin was then stained and stain was removed. When no more dentin was stained a third sample was collected. Samples were then cultured and incubated to study the presence of bacteria (*Streptococcus mutans*). It was concluded from this study that using the conventional method of caries removal allowed the presence of some bacteria both bacteriologically and histologically. Using the dye allowed less bacteria to remain but again more tooth structure was sacrificed .

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