

Icon – Drilling? No thanks!

Caries is one of the most frequent dental diseases. We can detect it either clinically or radiologically and distinguish caries according to its progression and extension. Clinically, approximal spaces can generally not be precisely examined; therefore, for a closed dental arch, an x-ray in the form of a bitewing radiograph is indicated. Diagnostic assessments based on x-rays are part of a dentist's daily routine. X-rays are therefore the most important resource to determine and evaluate approximal caries.

On x-rays, extensive carious lesions stand out clearly as bright areas. A bright area extending beyond the first third of the dentine (D1) (fig. 1) still indicates the need for a filling restoration. For non-cavitated enamel defects with a maximal radiological extension into the first third of the dentine there is now a new solution where, so far, none of the various alternative approaches provided satisfactory results.

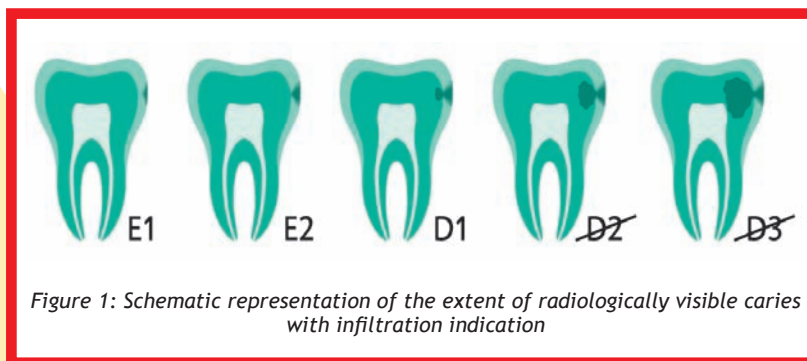


Figure 1: Schematic representation of the extent of radiologically visible caries with infiltration indication

Shall we wait until they get larger? Will a fluoride therapy be enough? Can we motivate our patients? Will the defect stabilise? Should the dentist take a chance? Many of these questions are going through dentists' minds on a daily basis.

Motivating our patients to practice better oral hygiene is an important step in preventing damage. But what about the legal situation, where a dentist detects a defect, does not restore it, and the defect progresses? And how do we work with the very distinct species of pubescent adolescents, in whom a considerable increase of caries has been observed, and who most frequently evade the rationality of the so-called adults.

The following case description introduces a new method that spurs hope that we will soon be able to treat class E1, E2, and D1 carious lesions without drilling and to prevent progression of the caries lastingly.

Medical history

The patient, age 13, comes to us for a routine checkup. Typical prophylactic examination.

Findings

Mucous membrane papillae slightly

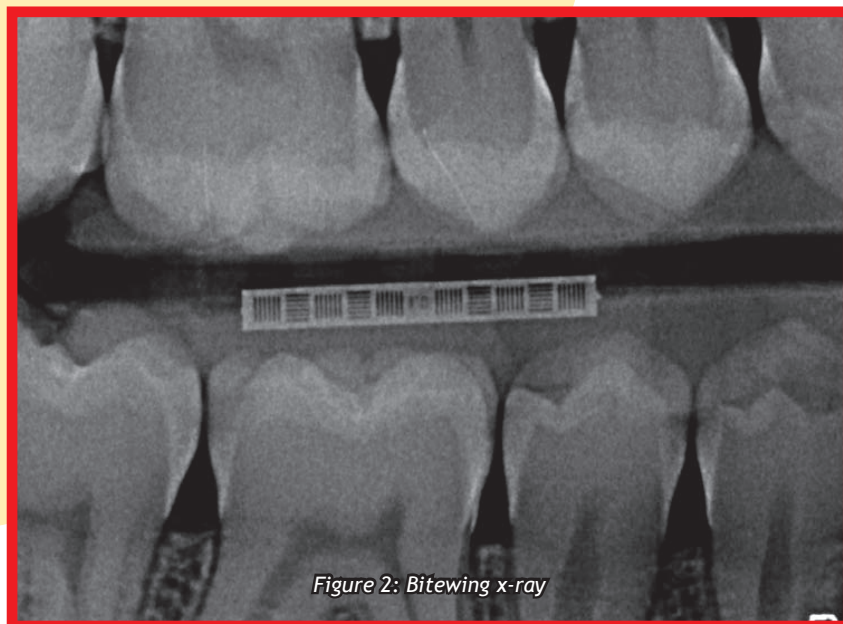


Figure 2: Bitewing x-ray