

THE MINIMALLY INVASIVE MANAGEMENT OF EARLY OCCLUSAL CARRIES

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УНИВЕРЗИТЕТ
ГОЦЕ ДЕЛЧЕВ

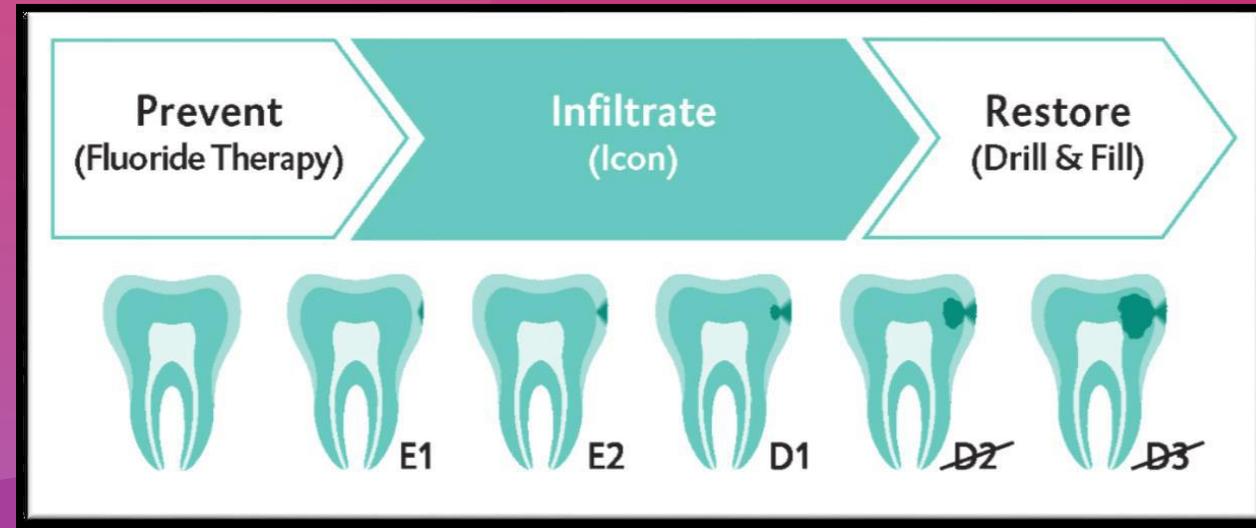
INTRODUCE

In recent years microinvasive methods for treating uncavitated carious lesions have been tried. These methods place a barrier on the surface of the lesion with the penetration of material into the body of the lesion (infiltration).

Currently, several microinvasive methods of treatment of such lesions are available, and one is infiltration of the carious lesion with low-viscosity composite resins.

Dental carious lesions, which extend to the outer third of the dentin, have traditionally been treated with invasive procedures, preparation and filling. Non-invasive alternative methods (e.g. fluoride varnishes, flossing) can prevent further tooth demineralization and substance loss, with their effectiveness depending on the patient's cooperation and motivation.

The aim of this paper is to evaluate the effects, advantages, and disadvantages of carious lesion infiltration, specifically in the adult population. Relevant literature from online databases such as PubMed and MedLine is reviewed regarding resin infiltration of initial carious lesions as a method of non-invasive restorative treatment.



Resin infiltration, marketed as Icon®, is a novel technology that bridges the gap between prevention and restoration of carious lesions, camouflaging aesthetically disfiguring white lesions on the buccal surface. It fills, reinforces, and stabilizes demineralized enamel without sacrificing healthy tooth structure.

Encouraging prevention through infiltration not only ensures good oral health but also saves time, money, and reduces patient stress associated with conventional methods of preparation and restoration. Therefore, recommending and performing caries infiltration with resin in adult patients when indicated can be highly beneficial.

This technique aims to create a diffusion barrier inside the lesion and not on the lesion surface. Whilst the process is still invasive, utilisation of 15% HCl acid to etch the tooth surface and erode the superficial enamel, this technique can be considered the least invasive after bleaching alone. The reason for its minimally invasive nature, is based on the index of refraction. As this case demonstrates the white spot is still present underneath, however by placing a TEGDMA resin, we are able to mimic the refractive index of enamel, thereby masking the white spot lesion. TEGDMA resin is used due to its optimal penetration coefficient capabilities.

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RESULTS & CONCLUSION

