

# The boost in Microinfiltration technique with sodium hypochlorite.



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## Description of the Clinical Case

A 45-year-old patient whose reason for the consultation was to improve the color appearance of his incisor teeth. We need to know the extent of white and brown spot lesions, so we used transillumination with the light curing to evaluate. The physical and clinical history evaluation, led to the following diagnosis: Dental Fluorosis. Prognosis: favorable. Treatment plan: microinfiltration (ICON®) and sodium hypochlorite (etch-bleach-seal technique). The patient would like to improve aesthetics but ideally without resins. As the technique of micro-abrasion sometimes leads us to finish with composite resin we thought of associating another technique that would remove or improve the appearance of the brown males, which would be the most difficult to treat.

## Keywords

Resin Infiltration; Etch-bleach-seal; White Spots; Aesthetics; Removal of stains

## Discussion

In the last few years, minimally invasive techniques such as infiltrative composite have been used in the treatment of white spot lesions as an alternative to hard tissue removal with burs.<sup>1,2,3,4</sup> The microinfiltration technique has been described as highly conservative in the treatment of non-cavitated white spot lesions, shows an apparently intact surface layer followed underneath by the more porous lesion body, giving a chalky opaque appearance, as light is scattered mainly within the lesion body. The purpose of the resin infiltration technique is to micro-invasively infiltrate the inter-crystalline spaces of enamel with polymerizable low viscous resin to arrest enamel lesions. Before this white spots can be infiltrated, it must be acid-etched to remove the hypermineralized pseudo-intact surface layer of enamel and thus permits resin infiltration into the body of the lesion.<sup>1,2</sup> To improve this technique and decrease the need of regular composite in the end in order to regularize the surface that often remains with cavities (in deeper zones) we associate another technique that has been lost in time as a bleaching enamel with sodium hypochlorite, known in the literature as Etch-bleach-Seal technique. Bleaching of hypomineralized enamel lesions, using 5% sodium hypochlorite, has been applied clinically and treatment using this approach has proven successful in removing yellow-brown discolorations from lesions in young permanent teeth.<sup>3,4</sup>

## CLINICAL PROCEDURE



Fig.1: Initial situation



Fig.2: Initial situation with absolute isolation



Fig.3: 37% orthophosphoric ac. 15 sec



Fig.4: three 10-minute applications of sodium hypochlorite



Fig.5: Apply Icon-Etch for 2 min



Fig.6: Apply Icon-Dry for 30 sec



Fig.7: Apply Icon-Infiltrant



Fig.8: Apply glycerin before the last polymerization



Fig.9: Polishing



Fig.9: Final Result

## Initial / Final / Follow up



Fig.10: Initial situation of her smile



Fig.11: One week after



Fig.12: 1 year and 6 months after

## CONCLUSION / DISCUSSION / CLINICAL RELEVANCE

With the correct use of these techniques, it was possible to improve the appearance of the anterior teeth. With the combination of this two techniques achieved as minimally invasive as possible and without recourse to a conventional resin at the end, like is often to see in most complicated cases in which we use micro infiltration or microabrasion techniques. It can be concluded that microinfiltration and etch, bleach and seal are safe techniques, providing favorable results in the treatment of white spot lesions and yellow-brown discolorations. However, in spite of this excellent result, more literature and more studies with prolonged follow-up periods about the "Etch, bleach and seal" technique and the combination of this two techniques are still necessary.

## REFERENCES

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