Minimally Invasive approach in anterior teeth clinical case

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Description of the Clinical Case

A 20-year-old male patient presented at the Instituto Universitário de Ciências da Saúde - Gandra, University Dental Clinic belongs to Department of Conservative Clinic complaining about the appearance of her smile. Finished orthodontic treatment 5 years ago, without relevant background. The extent of white spot lesions (13-23) was evaluated by transillumination with the light curing. The physical and clinical history evaluation, led to the following diagnosis: HIM (Molar Incisive Hipomineralization), desmineralization after orthodontic treatment and fluorosis. Prognosis: favorable. Treatment plan: microabrasion (Opalustre®), microinfiltration (ICON®) and diastema closure.

Keywords Resin Infiltration; Microabrasion; White Spots; Aesthetics

Discussion

In the last few years, minimally invasive techniques such as infiltrative composite (in more superficial enamel stains) and microabrasion technique (in deeper enamel stains) have been used in the treatment of white spot lesions as an alternative to hard tissue removal with burs. The microinfiltration technique has been described as highly conservative in the treatment of non-cavitated white spot lesions.The microabrasion aims at a minimally invasive approach in deeper enamel lesions. However, unlike conventional restorations, in this technique there is only the necessary abrade for total removal of the lesion.

Clinical Case

1

Fig.1: Initial situation intraoral

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Fig.2: Initial situation

3a 3b 3

Fig.3a,b: Initial transilluminating test with the light curing

Clinical Protocol

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Fig.4: Absolute isolation

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Fig.5: Apply Opalustre®

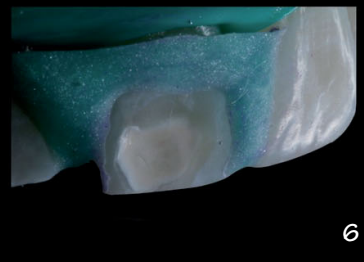

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Fig.6: Aspect after microabrasion

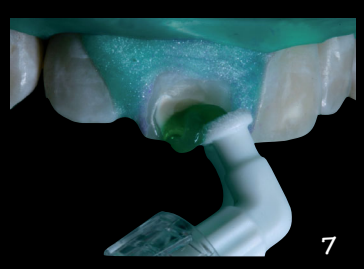

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Fig.7: Apply Icon-Etch for 2 min

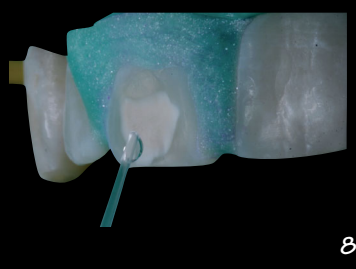

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Fig.8: Apply Icon-Dry for 30 sec

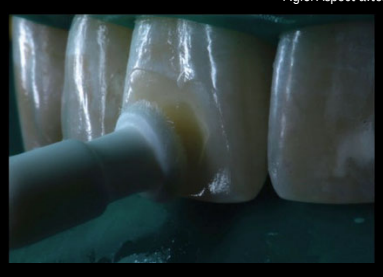

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Fig.9: Apply Icon-Infiltrant

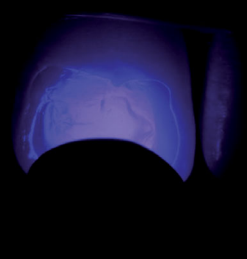

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Fig.10: Light-cure for 40 sec

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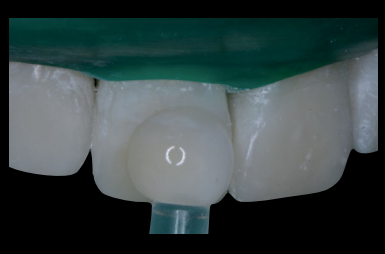
Fig.11: Restorative procedure with Inspiro Direct® Skin Neutral Enamel shade



12

Fig.12: Apply glycerin

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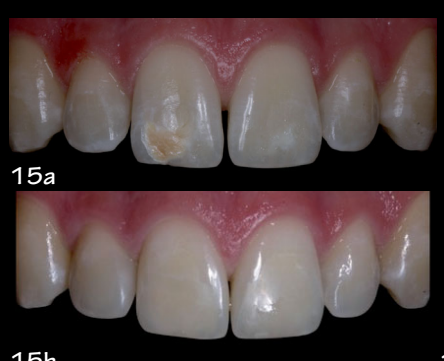
Fig.13: Finishing and Polishing

14a 14b 14

Fig.14: Polarizing filter 14a: Initial situation before clinic procedure. 14b: Final situation after clinic procedure

Final Result

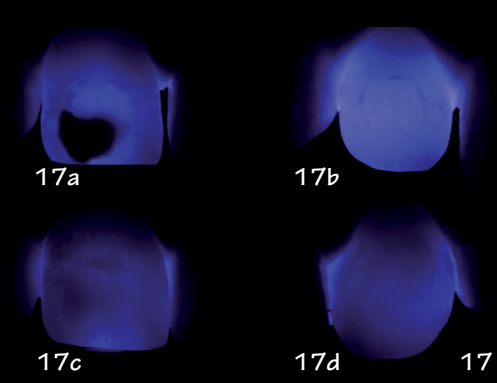


15a 15b 15

Fig.15: Intraoral. 15a: Initial situation before clinic procedure. 15b: Final situation after clinic procedure

16a 16b 16

Fig.16: Intraoral. 16a: Initial situation before clinic procedure. 16b: Final situation after clinic procedure



17a 17b 17c 17d 17

Fig.17: Transilluminating test with the light curing. 17a,b: Inicial. 17c,d: Final

Conclusions

With the correct use of these techniques, it was possible to improve the appearance of the anterior teeth. It can be concluded that microabrasion and microinfiltration are safe techniques, providing favorable results in the treatment of white spot lesions. However, studies with prolonged follow-up periods are necessary in order to evaluate the long-term behavior of the composite.

References

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