

Traumatic dental injury of permanent teeth A Clinical case

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Clinical case description:

Female patient, 15 years old, came to the Clinic of the Faculty of Dental Medicine of University of Oporto for a routine appointment. Teeth 11 and 21 showed enamel-dentin fractures (Figures 1 to 3). Patient had a history of fall at the age of 9, which caused the injury. Vitality tests were positive and the teeth were not sensitive to percussion. No radiographic abnormalities were found. A silicon palatal guide was taken from the mock-up (Figures 4 and 5) in order to create a palatal wall. A direct aesthetic rehabilitation with resin composite Z100™ Restorative (3M) was done (Figures 6 to 9).

CASO CLÍNICO



Figure 1 – Inicial photograph (Lateral left view)



Figure 2 – Inicial photograph (Frontal view)



Figure 3 – Inicial photograph (Lateral right view)



Figure 4 – Mock-up with silicon guide



Figure 5 – Silicon palatal guide



Figure 6 – Final photograph immediately after treatment (Lateral left view)



Figure 7 – Final photograph immediately after treatment (Frontal view)



Figure 8 – Final photograph immediately after treatment (Lateral Right view)



Figure 9 – Final Photograph immediately after treatment (Smiling)

Discussion

Traumatic dental injuries are frequently accidental and generally need dental assistance.¹ These injuries often happen in the superior arch, and falls, sports and traffic accidents are usually their causes.² There are some predisposing factors for these dento-alveolar lesions, such as large overjet and labial incompetence. Permanent teeth are the most affected ones.^{2,3} These kinds of lesions can be associated with a variety of physical and psychological consequences and patients can inclusively avoid smiling, which influences his/her social behavior.^{3,4} The length of time from injury to treatment is an important factor for the success of the majority of the cases and there's usually a need for a long-term follow-up.^{2,5} Using a silicon guide taken from a mock-up is a simple procedure that offers several benefits, like helping to obtain the correct form and texture, having a base to deposit the resin composite and allowing an excellent adaptation.⁶

Conclusions

Traumatic dental injuries' approach must ensure the success of the rehabilitation, both aesthetically and functionally. The silicon palatal guide taken from a mock-up helps to simplify the treatment and to improve the final result. The rehabilitation of the upper central incisors turn out to not only restore the aesthetic and function of the teeth, but also to improve patient's social behaviour.

References

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