Soft Tissues Exam Importance in Dental Trauma – Clinical Case

Marta Martins Coelho[1]*; Sara Magalhães[1]; Inês Cardoso Martins[1]; Ana Coelho[1]; Paula Faria Marques[1]

Faculty of Dental Medicine of the University of Lisbon[1]

Introduction

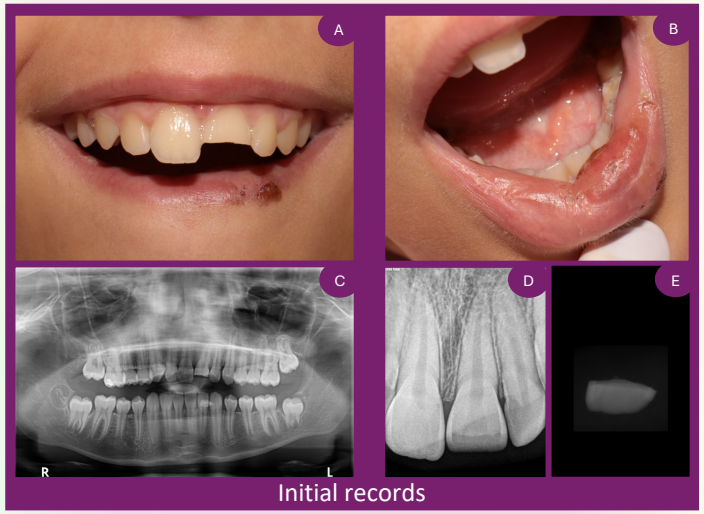
Dento-alveolar trauma occurs frequently in children and adolescents and can result in tooth fractures, displacement, bone fractures and soft tissue injuries. In the case of coronary fractures, if the fragment is not retrieved, the adjacent tissues should be assessed through palpation and radiographic evaluation to ensure that it has not become embedded. It is therefore considered very important to assess not only the teeth but also the soft tissues, both in the primary and permanent dentition.

Case Report

A 10-year-old female patient suffered dental trauma resulting from a fall at school. On that day, she was observed in a Hospital ER room where, according to the incident note, dentin protection was carried out on tooth 21. After three days, she went to the dental clinic for assessment. Clinical and radiographic examination revealed a coronal fracture of tooth 21 involving the enamel and dentin, with no apparent pulp involvement (Ellis class II), pathological mobility, gingival bleeding or root fracture (A;B;C;D;E).

Examination of the soft tissues revealed excoriation with edema of the lower lip and an incised wound, which was compatible with an injury caused by the fractured fragment impregnation (B). A careful and thorough radiographic evaluation showed the presence of the fractured coronary fragment retained in the lower lip (E), which was then surgically excised under local anesthesia. The fragment was discarded and the tooth was restored. Clinical and radiographic examination at 1 month and 1 year showed normal pulp vitality, no apical lesion and the tooth remained asymptomatic (F;G).

Case Documentation



Initial records

1 year follow up

References

Discussion

In the case of dental fractures (without pulp involvement), when the definitive restoration of the tooth is not carried out immediately, and in order to avoid microleakage, dentin protection with glass ionomer or placement of an adhesive agent and the respective provisional restoration should be carried out.[1;4] If the fragment is available and intact, it can be adhered to the tooth after hydration in saline twenty minutes before adherence.[1;4]

If the fragment is not found, the adjacent tissues should be assessed to ensure that it has not become embedded in the soft tissues.[1] The trauma assessment should include extra and intra-oral soft tissues (lips, oral mucosa, tongue, attached and free gums and the lingual and labial frenulum) to detect foreign bodies.[1;2;3;4] Soft tissue radiographic examination should be performed using low exposure, complemented by CBCT or ultrasound, if necessary. Clinical and radiographic 6-8 weeks follow-up after rehabilitation is crucial to detect possible pulp or periodontal complications.[1;4]

Clinical cases of tooth fragments retained in the lower lip and tongue after trauma for several months have been reported, and in some cases their detection only occurred after spontaneous exposure of the fragments.[3] If they are not removed, chronic infection may occur persistent with secretion of inflammatory exudate, fibrosis and discoloration of the mucosa.[2;3]

Conclusion

A detailed clinical and radiographic examination of patients who suffer orofacial trauma, including the soft tissues, is considered essential in the management of such cases.