Acta Scientific Dental Sciences
Volume 10 Issue 5 May 2026

Case Report

# Spontaneous Re-eruption of Intruded Primary Incisors in an 18-Month-Old Child: Clinical Insight into Conservative Management

**Khouloud Ben Mansour[1-3]*, Manel Chalbi[1-3] and Mohamed Ali Chemli[1-3]**

[1]*Pediatric Dentistry Department, la Rabta Hospital, Tunis, Tunisia*
[2]*Laboratory of Research ABCDF, Tunisia*
[3]*Faculty of Dental Medicine of Monastir, Tunisia*

***Corresponding Author:** Khouloud Ben Mansour, Pediatric Dentistry Department, la Rabta Hospital, Tunis, Tunisia.

**DOI:** 10.31080/ASDS.2026.10.2106

**Received:** January 16, 2026
**Published:** April 13, 2026
© All rights are reserved by **Khouloud Ben Mansour., *et al.***

## Abstract

**Introduction:** Intrusive luxation is one of the most severe forms of traumatic dental injuries in early childhood. Management is challenging because of the relationship between primary teeth and the developing permanent tooth germ. Current guidelines favor conservative approaches, particularly in very young patients.

**Methods:** An 18 month-old girl was referred following a domestic fall. Clinical and radiographic examinations revealed intrusive luxation of multiple maxillary primary incisors associated with a labial alveolar bone fracture and soft-tissue injuries. Emergency management included oral disinfection and suturing of a lower labial mucosal laceration. A conservative approach based on clinical monitoring for spontaneous re-eruption was adopted.

**Results:** At the one-week follow-up, complete resolution of edema and satisfactory soft-tissue healing were observed. The two-month follow-up demonstrated full spontaneous re-eruption of all intruded primary incisors, with complete gingival healing and no evidence of pain and infection.

**Discussion:** This case illustrates the high potential for spontaneous re-eruption of intruded primary incisors in very young children, even when associated with an alveolar bone fracture. Conservative management with careful clinical monitoring can lead to favorable outcomes, in accordance with current IADT recommendations.

**Keywords:** Child; Intrusive Luxation; Primary Teeth; Incisor; Dental Trauma

## Introduction

Intrusive luxation in deciduous teeth, described as the displacement of a tooth inside the alveolar bone resulting from axial impact in the apical direction [1].

This type of traumatic injury is significantly more frequent in deciduous teeth than in permanent teeth [2].

"This type of trauma most often affects the maxillary incisors due to their exposed and prominent position in the dental arch [19].

This circumstance can be explained by the developing motor coordination and limited protective reflexes observed in preschool-aged children [3].

The management of intrusive luxation in primary teeth is influenced by several factors, including the degree of intrusion, the child's age, and the potential risk to the developing permanent tooth germ [4]. Extraction can be necessary in certain situations, particularly in case of a significant risk to the permanent tooth germ or lack of child's cooperation during treatment [5]. Nonetheless, In recent years, there has been a shift toward minimally invasive treatment in paediatric dentistry, with many authors recommending conservative approaches such as clinical monitoring and minimally invasive endodontic therapy for deciduous teeth [6,7]. Monitoring involves regular follow-up and observation of non-progressive lesions, especially in asymptomatic cases, allowing for natural healing or delayed intervention when appropriate.

This evidence englobes/supports the development of conservative treatment plans even for managing dental intrusions in primary teeth [2].

## Case Presentation

A 18-month-old girl was brought to the emergency department after a bed collapsed, causing her to fall onto the floor. Initial evaluation in the emergency service showed no vital compromise/ included a full set of vital signs, which were within normal limits, and the patient presented no immediate symptoms.

She was subsequently referred to the pediatric dentistry department, University Hospital Rabta, Tunisia for further evaluation. Medical history obtained from the parents indicated that the child showed no specific problems.

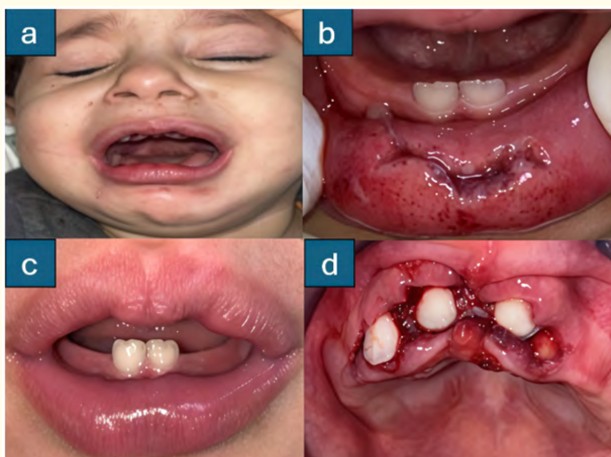


**Figure 1:** a; extraoral inspection; b; a laceration of the lower labial mucosa; c: Teeth 71 and 81 were immobile and asymptomatic;d:intrusive luxation of 51; 61 and 62 with alveolar bone fracture.

Clinical extra oral inspection at the first appointment revealed edematous (swelling of the lips, with no other external injuries observed (Figure 1,a).

Then ; a careful intraoral examination showed a laceration of the lower labial mucosa (Figure 1, b).

The mucosal examination was followed by the dental assessment, which revealed the presence a total of six teeth: the 52, 51, 61,62, 81, and 71.

A tooth-by-tooth examination enables the detection of these findings:

- Teeth 71 and 81 were immobile and asymptomatic to both axial and transverse percussion (Figure 1, c)
- Teeth 51 and 61 exhibited signs of intrusion luxation accompanied by a fracture of the alveolar bone (Figure 1, d)
- Tooth 62 was barely and slightly visible on the arch and was covered with blood, which supports also the diagnosis of intrusion
- Tooth 52 was mildly subluxated

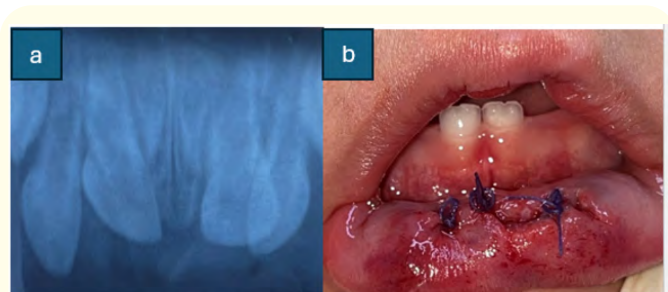


**Figure 2:** a: retroalveolar radiograph of the incisor region. b: inferior lip wound suturing.

"A retroalveolar radiograph was performed in the incisor region to complete the diagnosis and establish the treatment plan (Figure 1; a).

It confirms the diagnosis of intrusion among teeth (51, 52 and 62).

The emergency treatment was starting with a total oral disinfection using betadine solution. The patient then benefited from inferior lip wound suturing under local anaesthesia (Figure 1;b). As for the gingival wound associated with the intrusion of teeth 51 and 61, suturing was not feasible due to non-viable wound margins.

For the incisor injuries, the treatment consisted of allowing spontaneous reeruption, along with the recommendation to use a soft toothbrush with cotton and an alcohol-free BDB solution twice daily for one week. Spontaneous reeruption was monitored through clinical and periodic follow-ups.

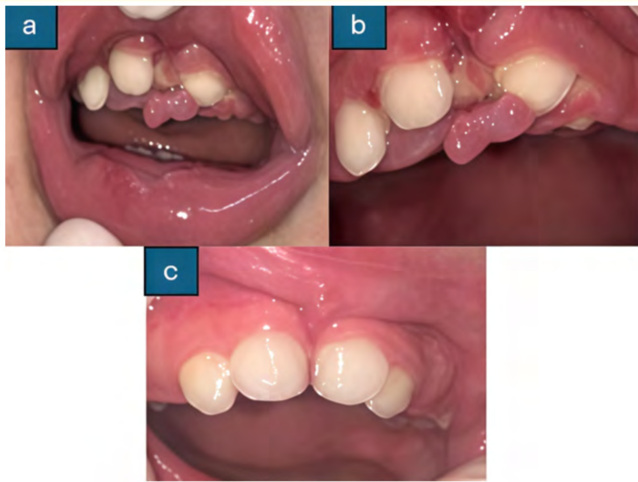


**Figure 3:** a; b: follow-up one week after, C: follow-up two months later.

A follow-up was conducted one week later, revealing the absence of symptoms or pain, resolution of the edema, healing of the mandibular wound, and the presence of fibrin deposits in the upper wound (Figure 3: a, b).

The second follow-up, conducted two months later, showed complete healing with a satisfactory appearance of the gingival wound. All traumatic teeth had successfully returned to their original position and teeth 51, 61, 62 had fully re-erupted (Figure 3:c) Ongoing follow-up is being maintained, and we remain in regular communication with the patient's parents.

## Discussion

Intrusive luxation of deciduous incisors is a severe form of traumatic dental injury often encountered in pediatric patients, primarily due to falls or other accidents during early childhood [8]. Traumatic injuries to primary teeth can lead to various sequelae, both in the deciduous teeth and in the developing permanent teeth, with intrusion and avulsion being the types most commonly associated with long-term complications [9]. Therefore, the management of traumatized intruded primary teeth is crucial to mitigate severe sequelae [10]. The treatment in this case report was monitoring for spontaneous re-eruption, as recommended by the latest IADT guidelines [11]. This conservative approach has been supported by numerous researchers and studies, which have shown that the majority of intruded primary teeth re-erupt spontaneously, regardless of the depth of intrusion [12]. It was observed that completely or severely intruded teeth typically re-erupt within 4 to 6 months, while partially or mildly-to-moderately intruded teeth usually re-erupt within 2 to 4 months [13] and this was also observed in our case report, further supporting the use of a conservative approach.

Also, Intrusion injuries to primary teeth are among the most severe types of dental trauma and can sometimes be accompanied by fractures of the surrounding alveolar bone, particularly the labial cortical plate which is similar to our reported case. Despite the potential severity of such injuries, clinical studies have shown that the presence of a labial bone fracture does not necessarily hinder the natural re-eruption process of the intruded primary tooth and found no statistically significant difference in the rate or success of spontaneous re-eruption between intruded primary teeth with or without associated alveolar fractures [14]. Additionally, it was found that the number of intruded primary teeth did not affect their ability to re-erupt [15]. Also, monitoring for spontaneous re-eruption is preferred, as nowadays extraction is no longer considered the first-line treatment for intruded primary teeth. This shift is based on evidence showing that the development of sequelae in traumatized primary teeth is more closely related to the severity of the initial injury than to the type of treatment provided [16].

Besides**;** Younger children, typically those aged 1 to 3 years, exhibit a higher potential for spontaneous re-eruption of intruded primary teeth compared to older children [17] and this was consistent for our young patient. This phenomenon is attributed to the more elastic alveolar bone and less developed root structure in younger children, which may allow for easier repositioning of the tooth [17]. However, this age group is also more vulnerable to damage to the permanent tooth germ due to the close anatomical relationship between the primary tooth apex and the still-developing successor tooth [18]. Trauma occurring during the critical stages of permanent tooth development, particularly crown

mineralization (which generally occurs before 2 years of age for incisors), can lead to various developmental disturbances [19]. Given these findings, children in this age group are particularly vulnerable to dental trauma, with most injuries resulting from falls and collisions within the home environment [20]. Age is also a critical factor in predicting the likelihood of sequelae in the developing permanent dentition [21]. Therefore, it is essential to emphasize the importance of educational programs aimed at preventing traumatic dental injuries (TDIs) and promoting proper home care. Increasing health awareness among parents and caregivers plays a key role in prevention [15]. Moreover, when trauma does occur, early diagnosis, appropriate management of the primary tooth injury, and long-term follow-up are crucial steps in minimizing the risk of complications in the permanent teeth [21].

## Bibliography


1. Mendoza-Mendoza A., *et al*. "Intrusive Luxation in Primary Teeth: A Case Report". *Journal of Clinical Pediatric Dentistry* 39.3 (2015): 215-218.
2. Soares TRC., *et al*. "Profile of intrusive luxation and healing complications in deciduous and permanent teeth - a retrospective study". *Acta Odontologica Scandinavica* 76.8 (2018): 567-571.
3. Colak I., *et al*. "A retrospective study of intrusive injuries in primary dentition". *Dental Traumatology* 25.6 (2009): 605-610.
4. Martioli G., *et al*. "Dental trauma and its sequelae in deciduous and permanent teeth-Longitudinal study". *Acta Scientiarum Health Sciences* 41 (2019): 34030.
5. Carvalho V., *et al*. "Frequency of intrusive luxation in deciduous teeth and its effects". *Dental Traumatology* 26.4 (2010): 304-307.
6. Flores MT. "Traumatic injuries in the primary dentition". *Dental Traumatology* 18.6 (2002): 287-298.
7. Cunha RF., *et al*. "Treatment of traumatized primary teeth: a conservative approach". *Dental Traumatology* 23.6 (2007): 360-363.
8. F A C Boer., *et al*. "Union between deciduous and permanent as intrusive luxation sequelae: A case report". *Dental Traumatology* (2024).
9. Lenzi M M., *et al*. "Does trauma in the primary dentition cause sequelae in permanent successors? A systematic review". *Dental Traumatology* 31.2 (2014): 79-88.
10. Ranka M., *et al*. "Trauma to the primary dentition and its sequelae". *Dental Update* 40.7 (2013): 534-542.
11. Levin L., *et al*. "International Association of Dental Traumatology guidelines for the management of traumatic dental injuries: General introduction". *Dental Traumatology* 36.4 (2010): 309-313.
12. Gurunathan D., *et al*. "Management and Sequelae of Intruded Anterior Primary Teeth: A Systematic Review". *International Journal of Clinical Pediatric Dentistry* 9.3 (2016): 240-250.
13. Colak I., *et al*. "A retrospective study of intrusive injuries in primary dentition". *Dental Traumatology* 25.6 (2009): 605-610.
14. Holan G and D Ram. "Sequelae and prognosis of intruded primary incisors: a retrospective study". *Pediatric Dentistry* 21.4 (1999): 242-247.
15. Defabianis P., *et al*. "Age, gender and degree of inclusion are predictors of timing for spontaneous repositioning of intruded primary teeth in pre-school children". *European Journal of Paediatric Dentistry* 23.4 (2022): 269-274.
16. Torriani D D., *et al*. "Histological evaluation of dog permanent teeth after traumatic intrusion of their primary predecessors". *Dental Traumatology* 22.4 (2006): 198-204.
17. Qassem, A., *et al*. "Long-term clinical and radiographic follow up of subluxated and intruded maxillary primary anterior teeth". *Dental Traumatology* 31.1 (2014): 57-61.
18. Costa V P P d., *et al*. "Effects of traumatic dental injuries of the primary dentition to the developing permanent teeth: a retrospective cohort study of 14 years". *Research Square* (2023).
19. Bardellini E., *et al*. "Dental Anomalies in Permanent Teeth after Trauma in Primary Dentition". *Journal of Clinical Pediatric Dentistry* 41.1 (2017): 5-9.
20. Cagetti M G., *et al*. "Italian guidelines for the prevention and management of dental trauma in children". *Italian Journal of Paediatric* 45.1 (2019): 157.
21. Andrade M R TC., *et al*. "Traumatic injuries in primary dentition and their immediate and long-term consequences: a 10-year retrospective study from the State University of Rio de Janeiro, Brazil". *European Archives of Paediatric Dentistry* 22.6 (2021): 1067-1076.