



Severe Early Childhood Caries Complicating a Traumatic Dental Injury

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BACKGROUND

- **Traumatic dental injuries** are common in toddlers
 - Poor coordination and balance in early stages of ambulation
- This case describes a 16-month-old male, who presented to the emergency department 11 days following a fall
 - Parental concern for unresolving severe pain and oral bleeding
- **Dental caries:** most common chronic childhood disease
 - Can complicate the clinical presentation and management of traumatic dental injuries.

ED Visit 12/2025

- A **16-month-old essentially negative male** presented with mother and father to the emergency department 11 days following a fall at home.
- **Chief Complaint:** Persistent oral bleeding, worsening pain and inability to eat or drink.
- **Dental History:** No dental home, cariogenic diet, constant milk consumption
- **Extraoral Exam:** Dry and chapped lips
- **Intraoral Exam:** Grossly carious and fractured primary maxillary central incisor, #E. Active bleeding when #E was stimulated. Generalized caries.
 - No obvious soft tissue source of hemorrhage.
- Radiographic Exam: Gross caries of #D, coronal fracture and caries of #E, and caries present on #F and #G. No root fractures evident, PDL spaces intact.
- **Diagnosis:** Complicated crown fracture of #E and irreversible pulpitis due to gross caries and trauma
- **Treatment:** #E-Extraction

ED Visit 2/2026

- Patient presented with mother and father to the emergency department, again, 3 days following a fall.
- **Chief Complaint:** Persistent pain and inability to eat or drink.
- **Dental History:** No dental home, cariogenic diet, constant milk consumption.
- **Extraoral Exam:** Dry and chapped lips
- **Intraoral Exam:** Grossly carious and fractured primary maxillary central incisor, #F, and lateral incisors, #D and #G.
 - Pulp exposure of #F, no active bleeding.
- Radiographic Exam: Gross caries of #D, F and G, complicated fracture of #F, uncomplicated fracture of #G approximating the pulp. No root fractures evident, PDL spaces intact.
- **Diagnosis:** Complicated crown fracture of grossly carious #F
- **Treatment:** #F-Extraction

COMPREHENSIVE TREATMENT

- Comprehensive Oral Evaluation with FMX at Riley Dental Clinic.
- **Dental Treatment**
 - Extractions: #D, #G
 - Hall Technique Stainless-steel crowns: #B, #I, #L, #O, #P and #S.
- **Anticipatory Guidance**
 - Parents were thoroughly educated on
 - Caries disease process & risk factors
 - Home Care (oral hygiene & diet)
 - Importance of a dental home.
 - Parents were receptive to counseling and plan to return for the patient's recall exam.

CLINICAL PHOTOS AND RADIOGRAPHS

Images are from 12/25 and 2/26 emergency department visits.

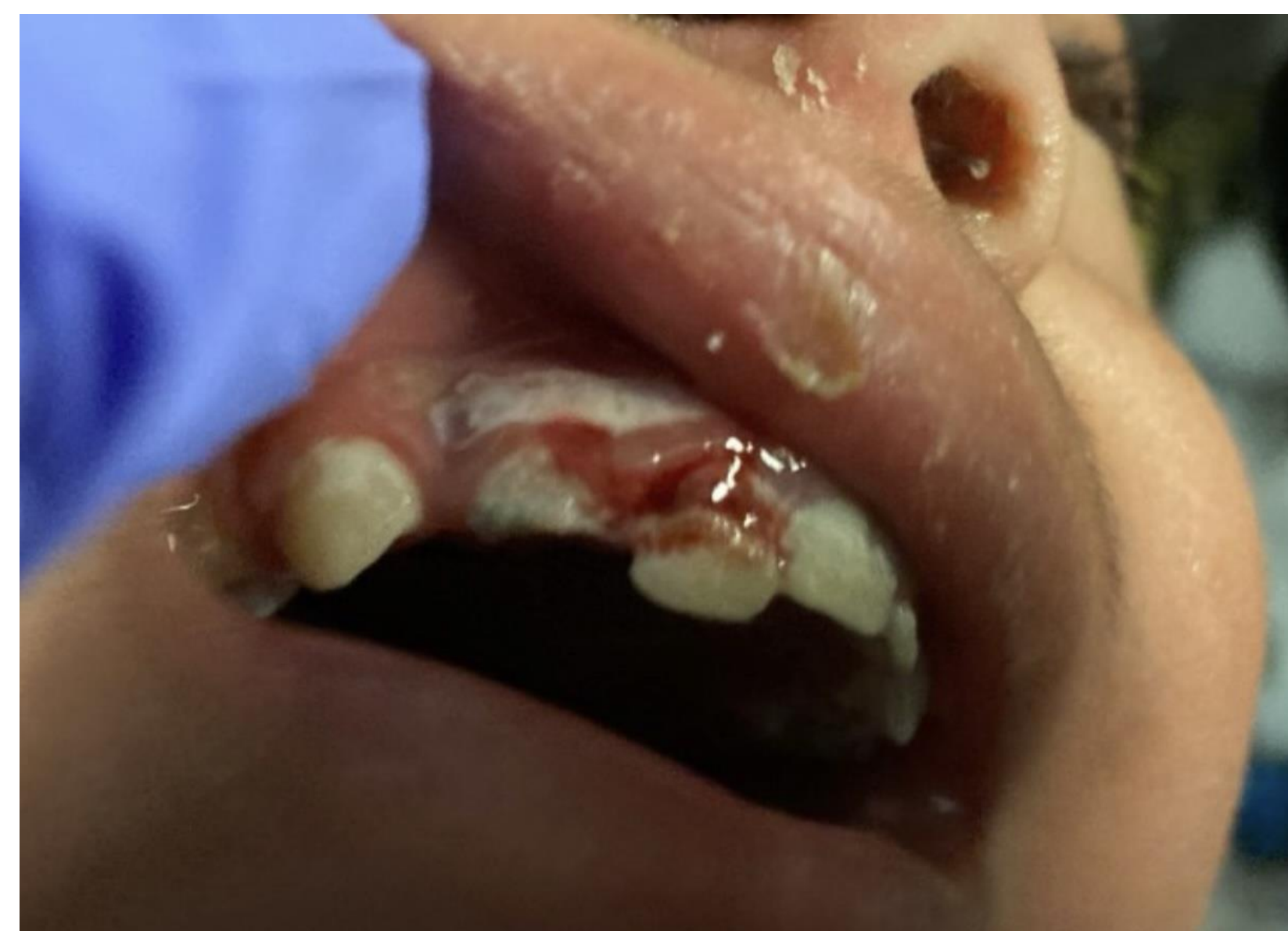


Image 1. Clinical photo from first ED visit in 12/25

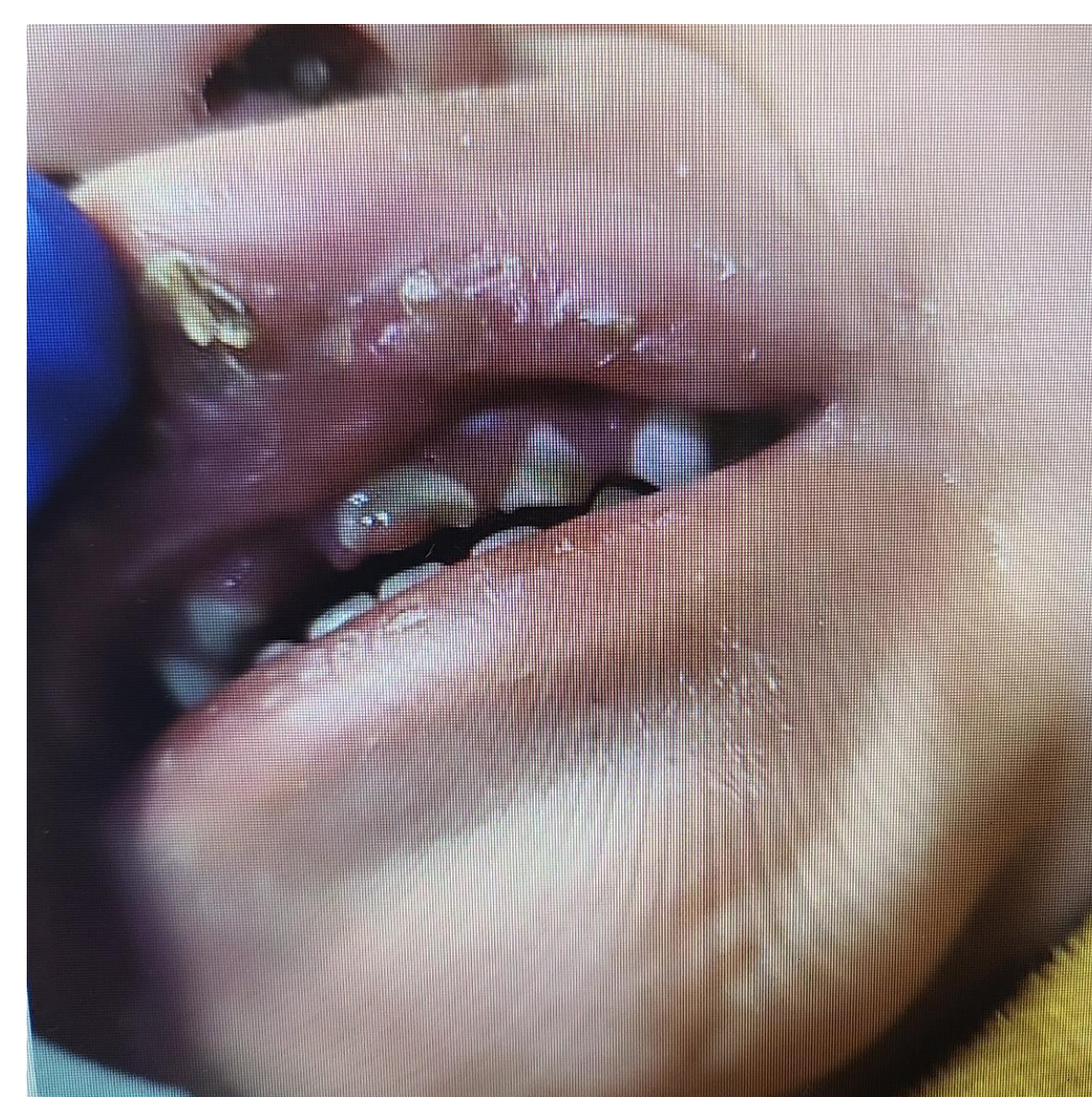


Image 2. Clinical photo from second ED visit in 2/26

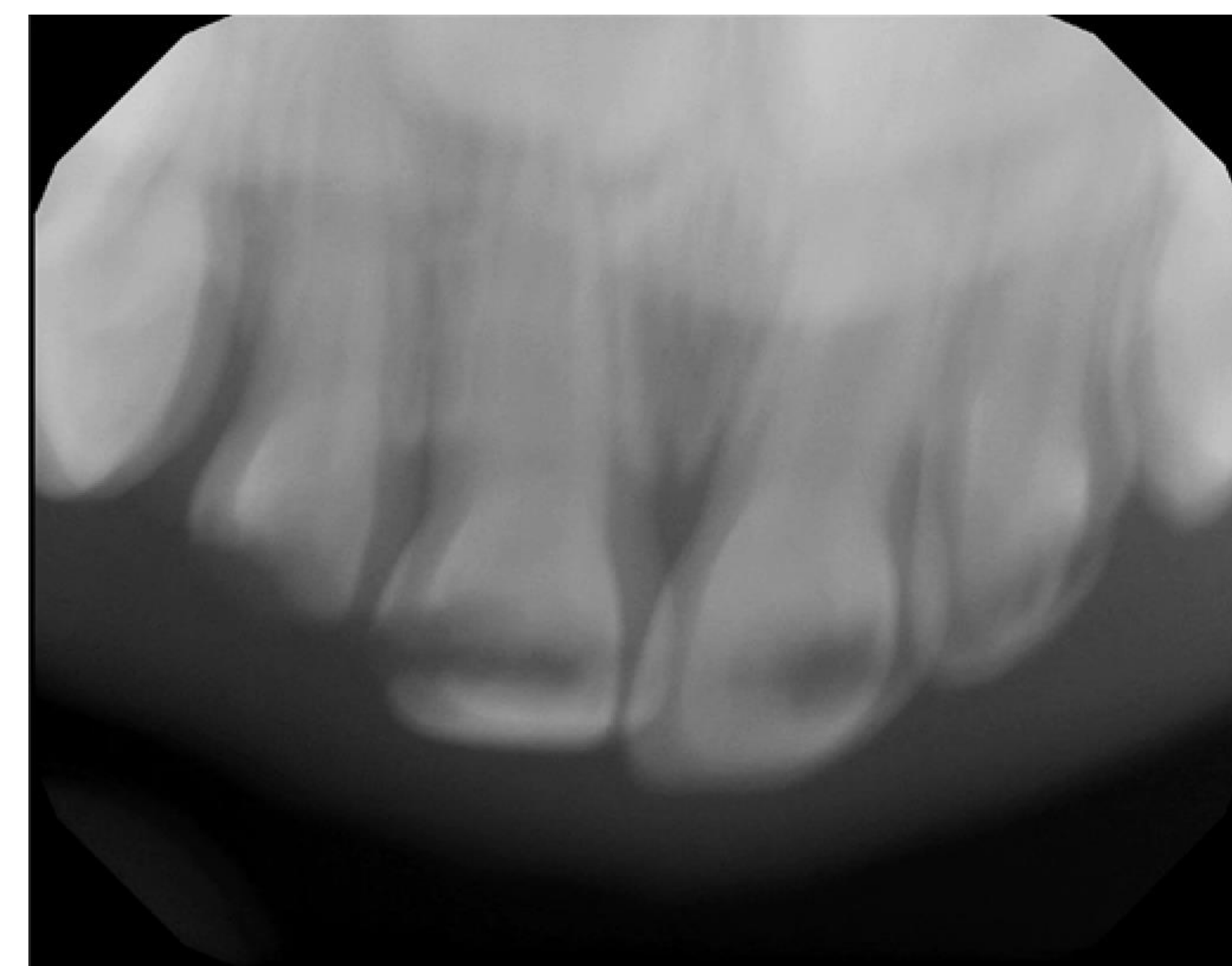


Image 3. UAO from first ED visit in 12/25

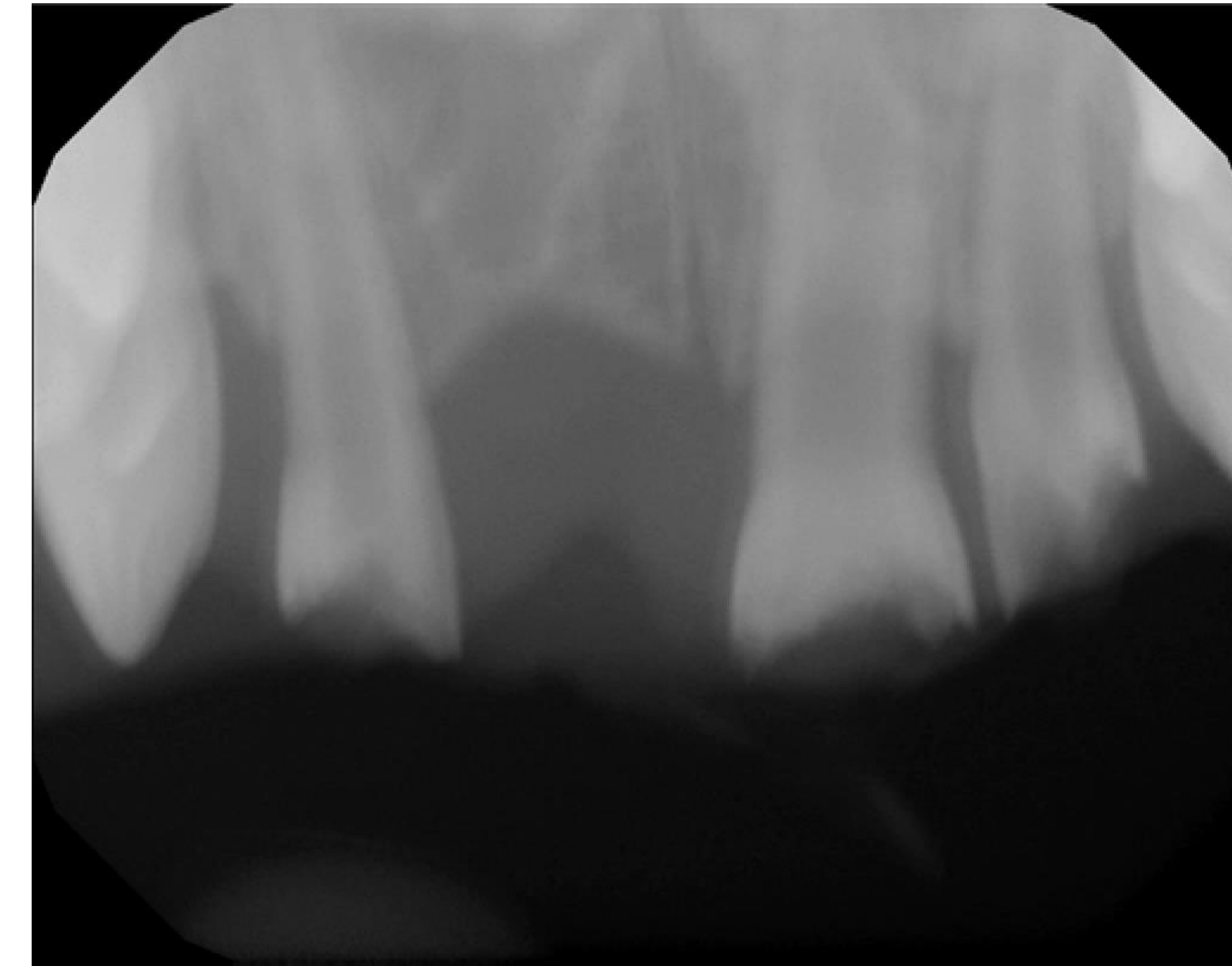


Image 4. UAO from second ED visit in 2/26

DISCUSSION

This patient case demonstrates how severe early childhood caries can not only obscure a definitive diagnosis but worsen the prognosis of traumatic injuries. Additionally, this highlights the importance of access to timely care, caregiver/patient education and establishing a dental home at age 1 or upon eruption of the first tooth. Regular preventative dental care is essential for reducing disease and avoiding emergency visits.

REFERENCES

1. American Academy of Pediatric Dentistry. Policy on early childhood caries (ECC): Consequences and preventive strategies. The Reference Manual of Pediatric Dentistry. Chicago, IL: American Academy of Pediatric Dentistry; 2025:96-100.
2. American Academy of Pediatric Dentistry. Policy on the dental home. The Reference Manual of Pediatric Dentistry. Chicago, IL: American Academy of Pediatric Dentistry; 2025:42-4.
3. Day P, Flores MT, O'Connell A, et al. International Association of Dental Traumatology guidelines for the management of traumatic dental injuries: 3. Injuries in the primary dentition. Dent Traumatol. 2020;36:343-359

