

# Dental trauma management in a patient with Lennox-Gastaut syndrome under general anesthesia: A Case Report

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## Abstract

Lennox-Gastaut syndrome (LGS) is one of the most severe epileptic encephalopathies that typically begins in childhood. It is characterized by multiple types of generalized seizures, delayed intellectual development, and distinctive electroencephalogram (EEG) patterns. A patient with LGS visited the ECU Special Care Clinic following a trauma. The patient was initially evaluated in an outpatient clinic and subsequently underwent restorative treatment in the operating room under general anesthesia. When providing dental care for patients with LGS, it is essential to consider the frequency of their seizures and their ability to cooperate in a traditional dental setting.

## Introduction

16-year-old female patient with Lennox-Gastaut syndrome visited the Special Care Clinic at the ECU School of Dental Medicine. During the initial visit, an examination was conducted in the outpatient dental clinic. The patient had experienced a seizure at home, during which she fell and hit her face and maxillary teeth on a countertop. She had previously visited the emergency room at a nearby hospital, where an examination revealed the following:

- Tooth #8 had a 3mm extrusion, 2mm palatal luxation, and Class III mobility.
- Tooth #9 had a 4mm intrusion and a Class II fracture, with no observed mobility.

At the hospital, the dentist placed a splint on teeth #6 through #11, which was removed after two weeks. The patient then sought a dentist capable of providing dental treatment under general anesthesia. She was evaluated at the Special Care Clinic at the ECU School of Dental Medicine.

During the evaluation, the patient was cooperative for the examination and the taking of periapical radiographs. However, due to her body movements and the complexity of the required treatment, it was determined that comprehensive dental care would be best performed under general anesthesia.

Preoperative screening tests included a thorough clinical examination and blood analysis, with no specific anomalies detected. In the operating room, general anesthesia was induced via inhalation of sevoflurane gas. Nasotracheal intubation was performed, and anesthesia was maintained with sevoflurane, nitrous oxide, and oxygen. A thorough oral examination was conducted, along with radiographs. Endodontic treatment was provided for teeth #8 and #9, and both were restored with composite strip crowns in shade A2. The patient recovered from general anesthesia without complications and was discharged the same day. A follow-up appointment one month later confirmed no pain, with restored function and aesthetics.

## Patient Information

### Patient Information

- 16-year-old female patient
- Chief Complaint: Patient fell at home during seizure and hit face and maxillary front teeth at countertop

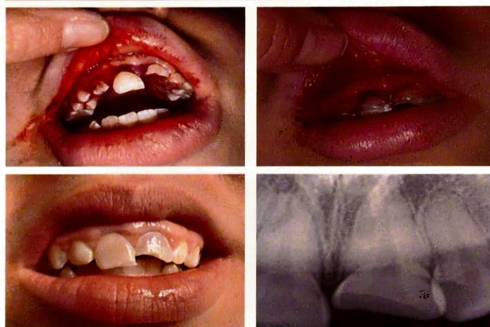
### Patient Medical History

- Lennox Gastaut Syndrome, Developmental Disability

## Patient Medical Record

Disease Status	Diagnosis
12/21/23	#8: no crown fracture, Mob(+++), per(+), 3mm extrusion and 2mm palatal luxation #9: crown fracture(Enamel and Dentin fracture), Mob(-), per(+), 4mm intrusion #8: no crown fracture
02/01/24	#9: crown fracture(Enamel, Dentin), mob(-), tooth discoloration

## Clinical Photographs and Radiographs



## Treatment in Operating Room

### Induction of General Anesthesia

- Volatile anesthetic induction with sevoflurane gas
- Nasotracheal intubation

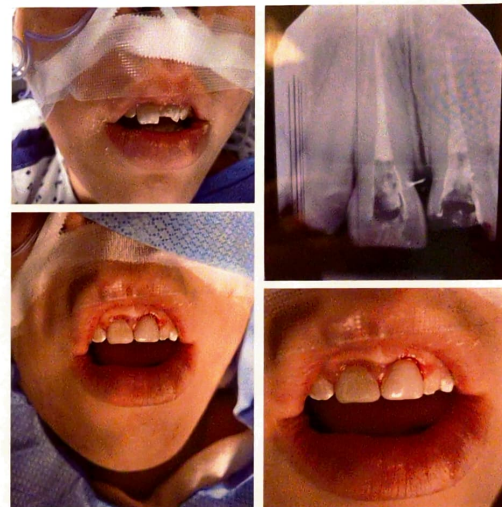
### Dental Treatment

- Comprehensive oral exam
- Radiographic exam of teeth #8 and #9
- Endodontic therapy of #8 and #9
- Composite restorations of #8 and #9

### Postoperative general anesthesia

- Vital signs stably maintained
- No clinical signs of pain and symptom

## Clinical Photographs and Radiographs



## Clinical Relevance

### Specialized Care Needs

Patients with medical complexities such as Lennox-Gastaut syndrome may require treatment under general anesthesia due to challenges in cooperation and movement control.

### Timely Intervention

Early management of dental trauma, including splinting and subsequent restorative care, is essential for optimal outcomes.

### Multidisciplinary Approach

Collaboration between dental and medical professionals ensures safe and effective treatment tailored to the patient's needs.

Follow-Up: Regular follow-up is critical to monitor healing and maintain restored function and aesthetics.