

# Pierre- Robin Sequence: A case report

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## Abstract

This presentation discusses the dental management of a patient with Pierre- Robin Sequence , an autosomal recessive inherited cranio-facial anomaly involving head and face structures. This can result in challenges with breathing, feeding, and speech development during infancy. PRS can occur as an isolated condition or be part of other syndromic associations.

This case report is about a 14-year-old male with Pierre-Robin Sequence whose dental home is Tufts University School of Dental Medicine Pediatric Dentistry Department since 2013. During recare visits , plaque accumulation, gingival inflammation and caries were noted on his teeth, because of poor oral hygiene and exacerbated by the ongoing orthodontic treatment. Due to patient dental anxiety , restorative treatment was provided using nitrous oxide/ oxygen inhalation.

## Background

- Pierre- Robin Sequence:
- congenital condition
  - associated with mutations on chromosomes 2,4,11,or 17.
  - affects head and face
  - classic triad : micrognathia, glossoptosis, upper airway obstruction with or without cleft palate.
  - hypodontia
  - delayed eruption of teeth
  - crowding and teeth miss alignment



Fig. 1 Bitewing radiographs

## Case Report

A 14-year-old male is a patient of record at TUSDM Pediatric Dentistry Department.

Medical history :

- Pierre- Robin Sequence,
- sleep apnea
- anxiety.
- Seasonal allergies

Past Surgical history :

- mandibular distraction osteogenesis (MDO) at 3,5 weeks old
- repair of a palatal cleft at 10 months old
- adenoidectomy, tonsillectomy, ear tube placement

Current medications:

- Prozac 1x day , Allegra prn

Extraoral clinical examination :

- convex profile with competent lips,
- underdeveloped mandible
- scar on right side of the mandible because of MDO

Intraoral exam:

- currently in orthodontic treatment
- gingival inflammation, plaque accumulation and Calculus.
- Agenesis #20, #30
- hypoplastic #19, 29
- Caries #29,31

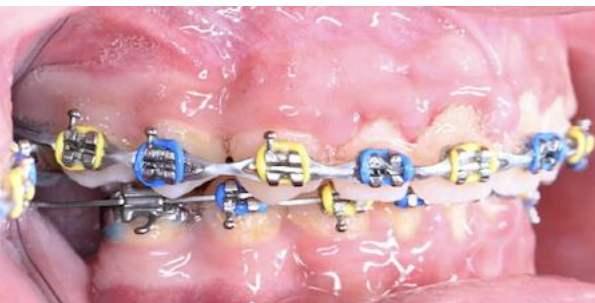


Fig. 6 Intraoral Photographs



Fig. 3 Facial Profile



Fig. 4 Facial Smile



Fig. 5 Facial Front

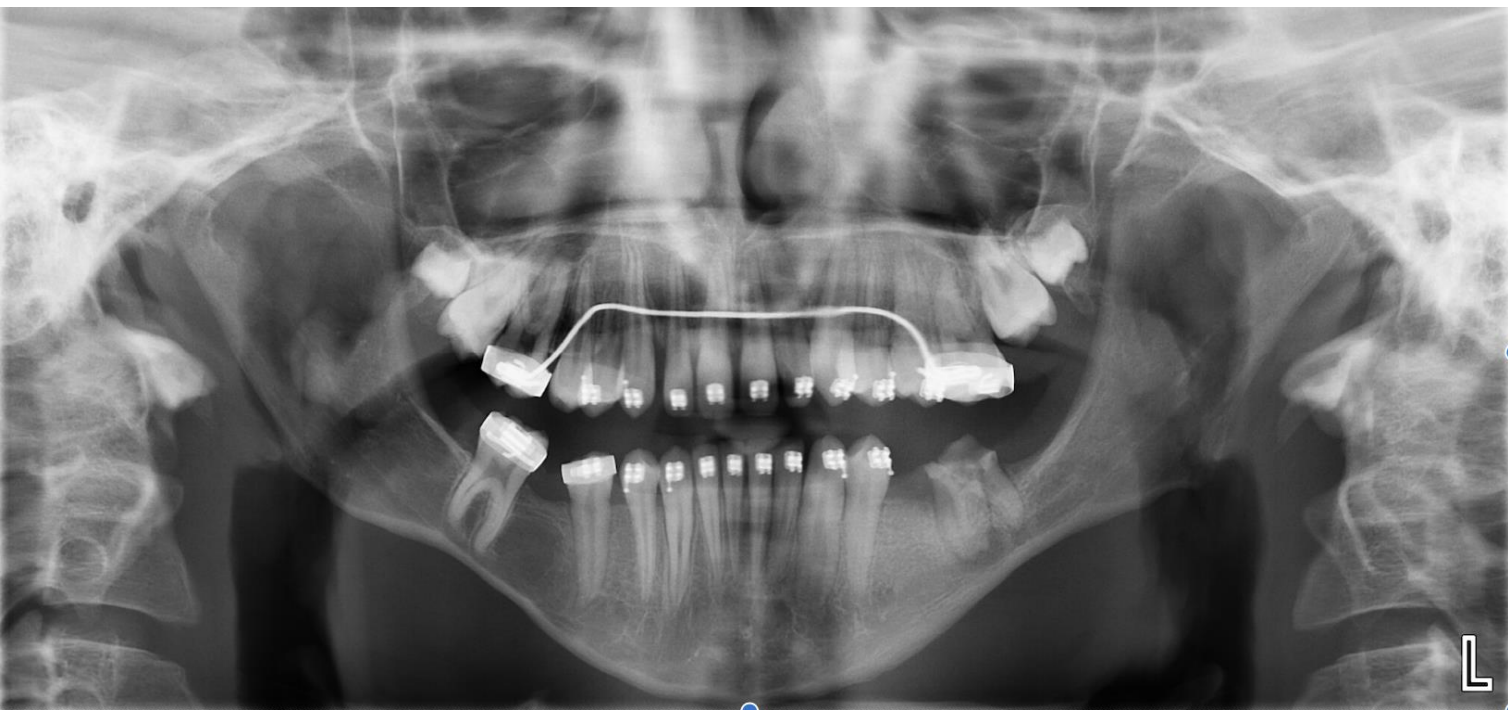


Fig. 2 Panoramic Radiograph

## Management

Treatment planning phase:

- Restoration of caries #29,31with nitrous oxide/ oxygen inhalation
- Extraction of hypoplastic #19 under general anesthesia with Oral Maxillofacial Surgery( OMFS)

Treatment Phase:

- Extraoral and intraoral clinical examination, radiographic examination, prophylaxis and fluoride application.
- Restorative Tx under nitrous oxide/ oxygen inhalation #29, #31

Maintenance phase:

- periodic exam, prophylaxis, fluoride varnish application, anticipatory guidance and caries risk assessment every 3 months due to high caries risk .

## Conclusion

- This case highlights the complex management associated with Pierre- Robin Sequence requiring a multidisciplinary approach involving pediatrics, ENT, pediatric dentistry, orthodontics , OMFS , speech therapy, psychology..

## References

1. Anesthetic Consideration in Pierre Robin Sequence  
Nikita Hegde<sup>1</sup>, Abhishek Singh<sup>2</sup>  
In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan2023 Jul 31.PMID: 3501546 Bookshelf ID: [NBK576442](#)
2. Pierre Robin Syndrome  
Diana Baxter; Anthony L. Shanks.
- 3- 5<sup>TH</sup> Edition Handbook of Pediatric Dentistry