Oral Management of a Child with DiGeorge Syndrome: Understanding Social Determinants of Health

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INTRODUCTION

A multidisciplinary approach for the successful oral management of a child with DiGeorge Syndrome.

ABSTRACT

DiGeorge Syndrome (DGS) is an autosomal dominant disorder resulting from a microdeletion of chromosome 22. Comorbidities include cardiac abnormalities, absent or hypoplastic thymus, increased risk for infection, developmental delay, hypoparathyroidism, abnormal facies, and enamel hypoplasia.[1] This case report presents treatment of a 9-year old male with DGS who had previous dental caries treated under general anesthesia in 2018. Due to difficulty in finding a dental home that takes his insurance and improper home care, he presented with new carious lesions approximately five years post OR treatment. After specialist consultations and multiple dental visits, chairside treatment was rendered safely with the benefit of reinforcing home oral hygiene care and a non-cariogenic diet at each visit.

CASE REPORT

9-year old male presented to Interfaith Dental Center accompanied by mother with a chief complaint of "he needs to be put to sleep for treatment." Mother had a referral from a private pediatric dentist.

Patient Medical History

- DGS, Pulmonary valve atresia, Tetralogy of Fallot, mild intellectual disability
- Medications: Hizentra
- Dental History: Oral Rehabilitation (2018), Irregular Dental Visits
- Diet/Oral Health: Brushes 1x/day. High frequency of cariogenic foods and drinks

Cardiologist Consult	Immunologist Consult
• s/p ventral septal defect and right ventricle repair • Cleared for dental procedure • SBE prophylaxis required for invasive procedures	• No reports of hypocalcemia • Annual labs to ensure stability • Hizentra 5g IV q2 weeks to minimize risk of infection

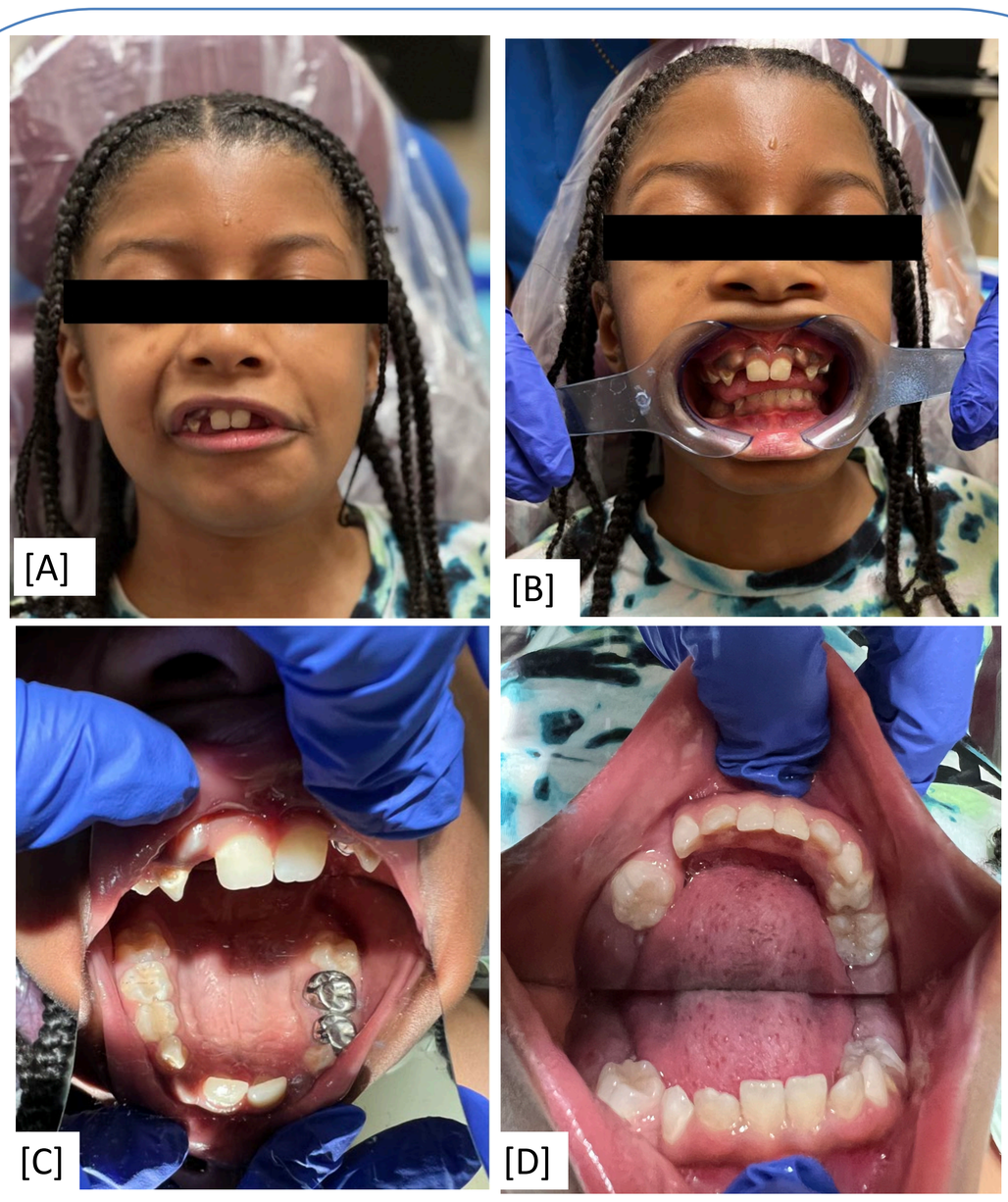

Fig 1: **Clinical Presentation of DGS** [A] Hypotonus orofacial muscles, smooth philtrum, micrognathia [B] Aberrant tooth structure [C/D] Delayed eruption of #7 #10, and #19, dental caries due to enamel hypoplasia

RADIOGRAPH

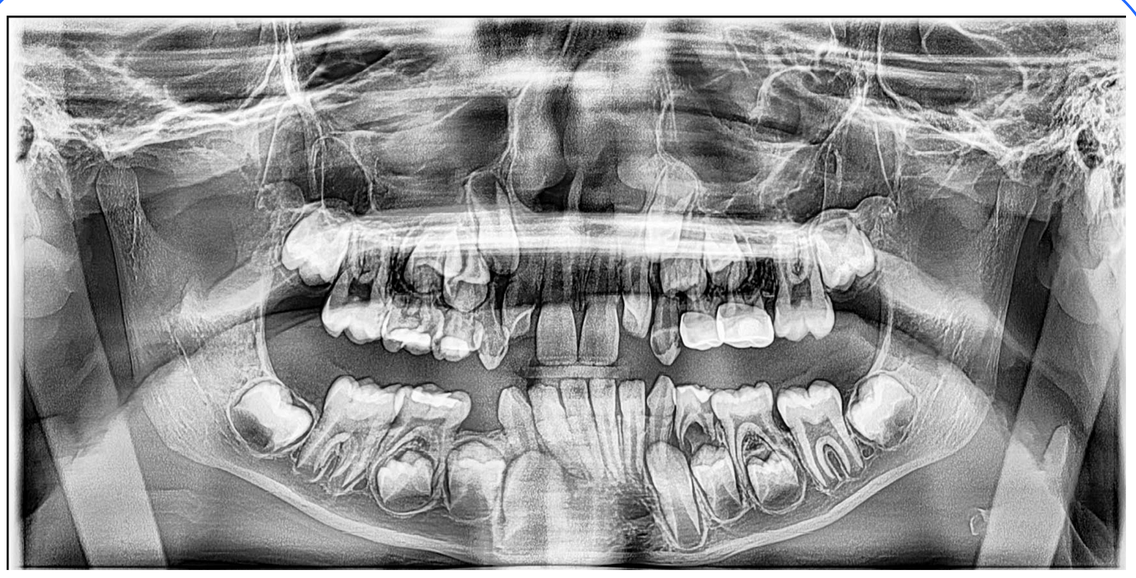

Fig 2: **Panoramic radiograph:** This panoramic displays unerupted #7 #10, and #19 as well as crowding due to patient micrognathia. Note: Dental care presented on image was provided previously in 2018.

TREATMENT PLAN & FOLLOW-UP

Treatment plan:

1) #H-F glass ionomer, #K-SSC, #L-Ext
2) #A-SSC, #B-SSC, #C-MIDFL glass ionomer
3) #T-B and #30-B glass ionomer
4) Ortho consult regarding delayed eruption of #19 and maxillary anterior crowding
5) 3 month recalls and radiographs every 6 month or as needed

At each visit: If plaque present, disclosing tablets were provided to reinforce successful at home hygiene.

BARRIERS TO HEALTH

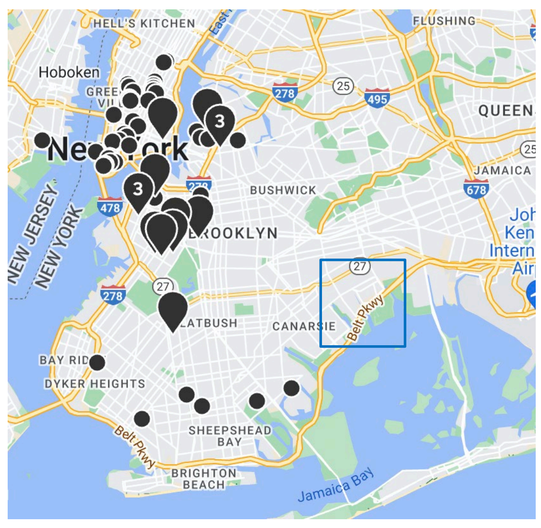

Fig 3: Map of NYC boroughs that accept patient's dental insurance. Blue square demonstrates where patient's family resides.

Prior to coming to Interfaith Dental Center, patient presented with a non-established dental home and overall poor oral health and diet. Mother stated she could not find a dental office that accepts patient's insurance. Patient's systemic disease and multiple cardiologist and immunologist appointments also precluded patient to accessing dental care at an earlier time. By utilizing each visit to address oral hygiene/diet concerns, parent has become a better home health manager allowing a decreased risk of dental caries and overall infection.

CONCLUSION

If treatment had been provided under GA as it had been in 2018, treatment would most likely fail due to a lack of proper oral hygiene and cariogenic diet control. Some of the common reasons for children requiring care even after GA includes child responsible for brushing own teeth and lack of follow-up care.[2] Through an established patient-provider partnership, the patient is at a much better trajectory to maintaining oral health for the future.

REFERENCES

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