

Introduction

Ectodermal Dysplasia (ED) is a genetic disorder that affects 7 per 10,000 births. This condition disrupts development of at least two structures derived from the ectoderm. Thus, tissues such as skin, hair follicles, sebaceous glands, and teeth may be abnormal in individuals with the condition. Oral manifestations include oligodontia, dental hypoplasia or conical shaped teeth. Given the oral manifestations associated to ED, dentists often play a crucial role in ED diagnosis. ED affects dental form, function and has significant psychosocial implications for patients.

Case Report

This presentation discusses a 9 year old male patient who presented to University of Puerto Rico School of Dental Medicine with a chief complaint of bullying associated to his dental condition. Clinical and radiographic examinations revealed oligodontia, dental caries, and excessive overjet. Restorative and preventive oral interventions were performed followed by interceptive orthodontic and prosthetic treatment. This case report details the clinical and radiographic findings associated with ED as well as the complete oral rehabilitation rendered to our patient.

Case Description

Physical exam findings:

- Hypotrichosis: arms, legs, eye brows and scalp

Oral exam findings:

- Oligodontia: #7,#10,#11, #21,#23,#24,#25,#26
- Hypoplasias :#8,#H
- Gingivitis, multiple dental caries and defective restorations
- Malocclusion: maxillary diastema: 5 mm, excessive overjet, anterior tongue posture



Figure 1. Pretreatment extraoral examination (Physical exam)



Figure 2. Pretreatment panoramic xray



Figure 3. Pretreatment intraoral examination

Discussion

The patient featured in this case report was referred to genetic services for genetic counseling. After performing restorative treatment on the patient, a literature review was conducted to assess prosthetic alternatives indicated for pediatric patients with ED. Among the alternatives found in the literature were implant supported dentures for pediatric patients with severe hypodontia. Given the presence of unerupted teeth #22 and #27 and risk of trauma to tooth germs while placing implants, a conventional prosthodontic rehabilitation with a fixed partial denture was selected for the mandibular arch. Use of the denture allows for nutritional, speech and smile improvement. Thus, contributing to patient's social acceptance with peers, self esteem and quality of life. Furthermore, use of the denture stimulates tooth eruption when tooth buds are present. In the maxillary arch, the patient was subjected to interceptive orthodontic treatment due to anterior maxillary teeth's position and propensity to dental trauma. A Hawley retainer with springs distal to teeth #8 and #9 and hooks to place 6 oz. elastics was designed with the purpose of retracting anterior maxillary teeth.



Figure 4. Prosthetic and interceptive orthodontic treatment

Conclusion

Determining prosthetic rehabilitation treatment for pediatric patients with ED requires consideration of skeletal growth status, degree of hypodontia, extension of related psychosocial stress, status of the existing dentition and dental compliance of the pediatric patient. After six months of interceptive orthodontic treatment, significant retraction of dental maxillary teeth position was achieved. Likewise significant improvement in patient's self esteem and oral health quality of life has been noted. Patient was maintained in a monthly recall program were eruption of teeth #22 and #27 is being monitored closely and lower partial denture as well as Hawley retainer are being modified as needed. Once all permanent teeth erupt patient will be reevaluated for phase 2 orthodontic treatment.

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