

A Temporary Fixed Prosthetic Solution for Ectodermal Dysplasia Patients with Partial Anodontia: A Case Report

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Background

Ectodermal Dysplasia is a rare and challenging hereditary disorder with abnormal development of tissues and structures of ectodermal origin.⁽¹⁾ A healthy 8-year-old male patient with Ectodermal Dysplasia was referred to the graduate Prosthodontics clinic at the University of Florida, Gainesville. As shown in the Orthopantomogram (fig.1), The patient has mixed dentition with partial anodontia. Previously, 2 sets of “Pedi Partials” were fabricated in the Pediatrics department to restore: function, esthetics, and phonetics. The mandibular denture became loose twice in a span of 2 months. It reported a fractured soldered joint next to the bands of deciduous #T and #K (Universal Numbering System).

Objectives

Most cases reported in the literature propose removable prostheses as an interim solution for patients with ED until their skeletal growth is completed. The use of a temporary material such as Polymethyl Methacrylate (PMMA) that can be frequently relined and does not hinder skeletal growth is an option to be explored. Therefore, A fixed 10-unit provisional FDP indirectly fabricated using PMMA was the prosthesis of choice in this case.

References

1. Pigno MA, Blackman RB, Cronin RJ Jr, Cavazos E. Prosthodontic management of ectodermal dysplasia: a review of the literature. J Prosthet Dent. 1996 Nov.



Fig. 1



Fig. 2



Fig. 3

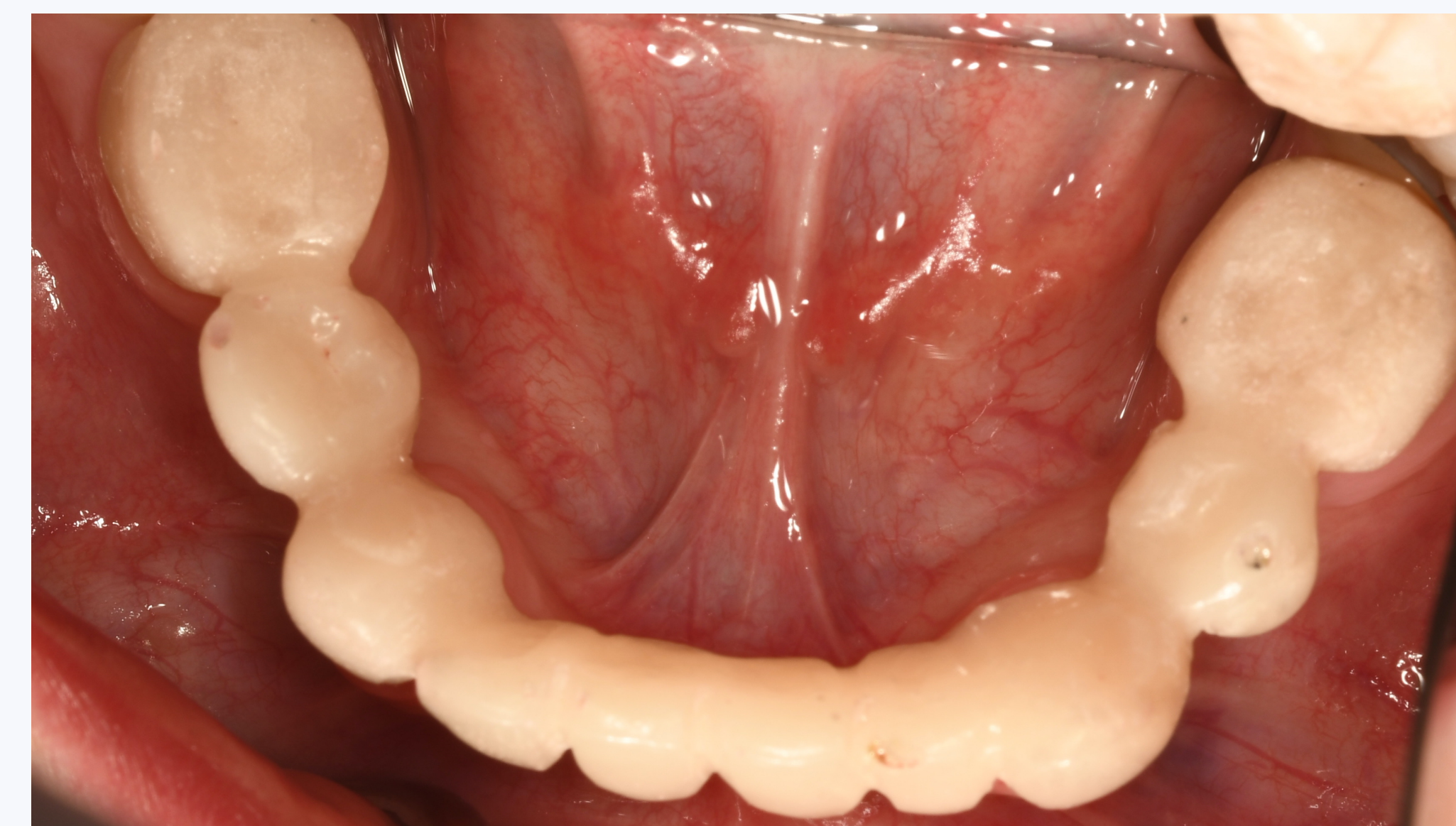


Fig. 4



Fig. 5

Technical steps

- Careful and minimal crown-prepping of the previously prepared deciduous canines and molars (Fig.2)
- Wax-up to mimic the teeth on the stone cast Microstone, ISO type III dental stone(Whip mix,Louisville) (Fig.3)
- Alike Temporary Crown Resin (GC America Inc.) was used to fabricate a 10-unit FDP temporary shell, indirectly. A space for cement was created on the retainer crowns # T, R, M, and K.
- The indirect 10-unit provisional FDP was relined with the same material, Clinically.
- The prosthesis was finished, polished, and cemented with Carboxylate Cement, Durelon™ (3M ESPE, Minnesota, USA). Occlusion was checked and adjusted accordingly using an articulating paper.
- A 6 to 12 months Follow-up is recommended.⁽¹⁾

Conclusion

The Fixed Polymethyl methacrylate (PMMA) provisional FDP seems to be a promising alternative for pediatric patients suffering from ED. Frequent follow-up and reline are recommended because of the growth of the patient.