

## AIM

Orofacial clefts are among the most common congenital craniofacial malformations with genetic and environmental risk factors. The variety of clinical features resulting from the cleft requires an extensive multidisciplinary approach in order to achieve optimal function and esthetics. Moreover, some authors hypothesize that cleft and hemifacial microsomia may have a common pathway leading to a disturbance in neural crest cell migration. The purpose of the present paper is to report a successful orthodontic treatment conducted on a unilateral cleft lip and palate patient with Pruzansky type I microsomia, in combination with maxillofacial surgery for bone grafting and subsequent prosthodontic rehabilitation.

## SUBJECT AND METHODS

An 11 years-old boy with unilateral (right side) cleft lip and palate that also presents Pruzansky type I microsomia was referenced by his pediatrician to the Institute of Orthodontics, Faculty of Medicine, University of Coimbra, for orthodontic treatment. The implemented treatment plan was the following: extra oral facebow; fixed appliances with Roth 0.018 prescription; secondary bone graft; germectomy of tooth 38 and 48; and prosthodontic rehabilitation.



Fig. 1: Initial extra oral photographs : front view (A) and profile view (B).



Fig. 2: Initial intra oral photographs : right side view (A), front view (B) and left side view (C).

## RESULTS

The extra oral facebow was used for anchorage control and molar distal movement. Leveling and alignment was accomplished through the use of fixed appliances with Roth 0.018 prescription. The alveolar bone graft allowed the orthodontic movement of teeth into the cleft site. At the end of the orthodontic treatment the maxillary anterior teeth were restored using composite resin in order to enhance shape and size.



Fig. 3: Final extra oral photographs before anterior rehabilitation with composite resin: : front view (A) and profile view (B).



Fig. 4: Final intra oral photographs before anterior rehabilitation with composite resin: right side view (A), front view (B) and left side view (C).



Fig. 5: Final extra oral photographs after anterior rehabilitation with composite resin: front view (A) and profile view (B).



Fig. 6: Final intra oral photographs after anterior rehabilitation with composite resin: right side view (A), front view (B) and left side view (C)

## CONCLUSION

Cleft lip and palate patients are complex to treat orthodontically, however a multidisciplinary approach supported by a good diagnosis resulted in successfully delivering a proper occlusion, function and esthetics to the patient.

## REFERENCES

