



INTRODUCTION

The association of Amelogenesis Imperfecta (AI) with gingival enlargement has previously been reported (1, 2), but remains a rare and poorly understood condition. Its effects can have functional implications and psychosocial impact on a growing child.

CASE PRESENTATION

An 11 year old was referred for management of bleeding gums and unsightly teeth. She presented with the following:

- Hyperplastic gingiva with pseudo-pocketing (generalized probing depths of 5-8mm) and periodontal abscesses;
- Rough hypoplastic, slightly soft, yellowish teeth with lack of proximal contacts;
- Over-retained 53 and 63;
- Delayed eruption of 26 and 46;
- Deep overbite (non-traumatic) with marked reduction in vertical dimension, secondary to delayed eruption of 26 and 46.

Based on clinical and radiographic findings, a diagnosis of hypoplastic-hypomaturation with taurodontism type AI and gingival hyperplasia was made. The patient had no relevant medical conditions. Her parents were unrelated, and there was no family history of AI or gingival enlargement.

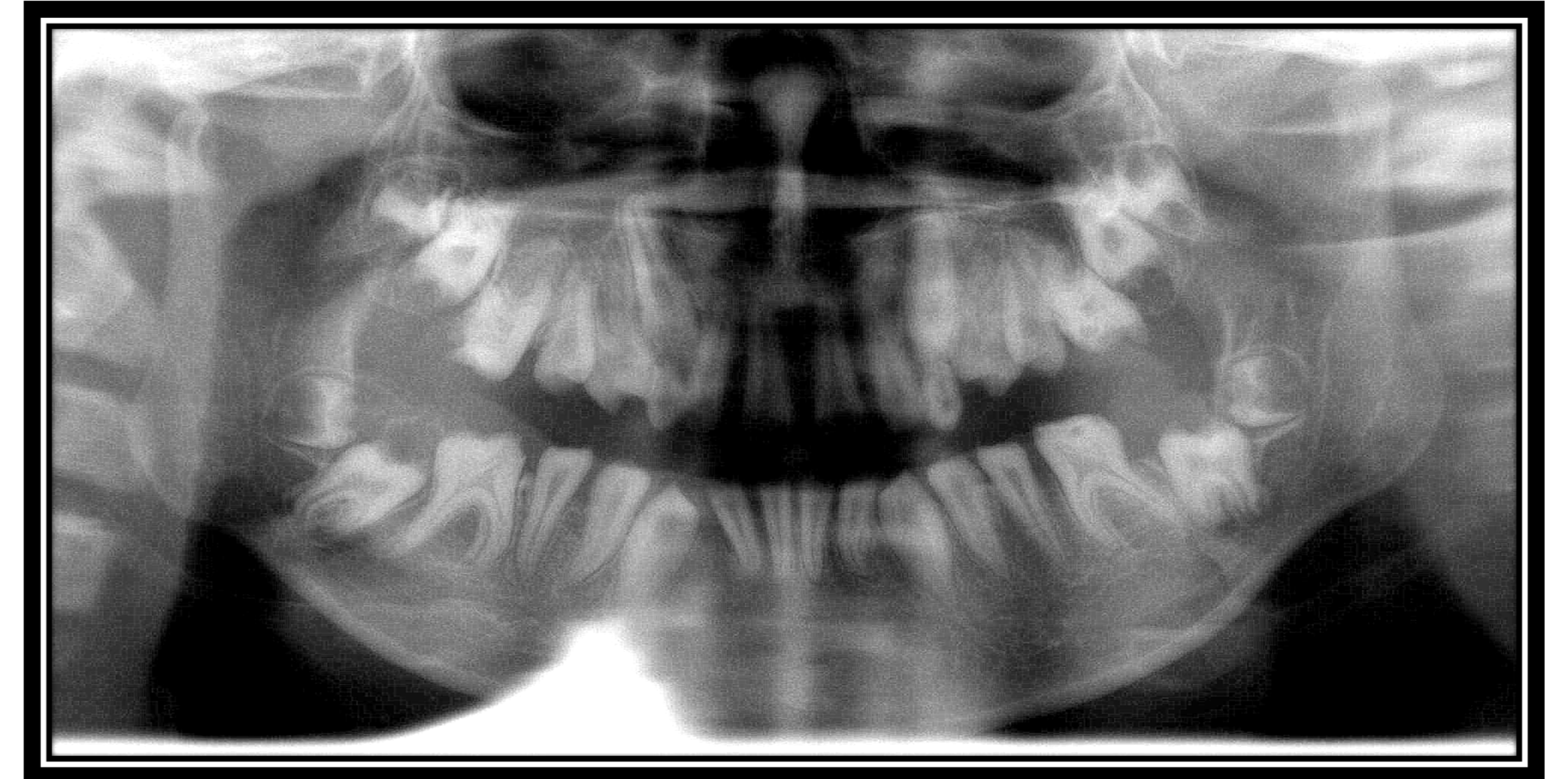
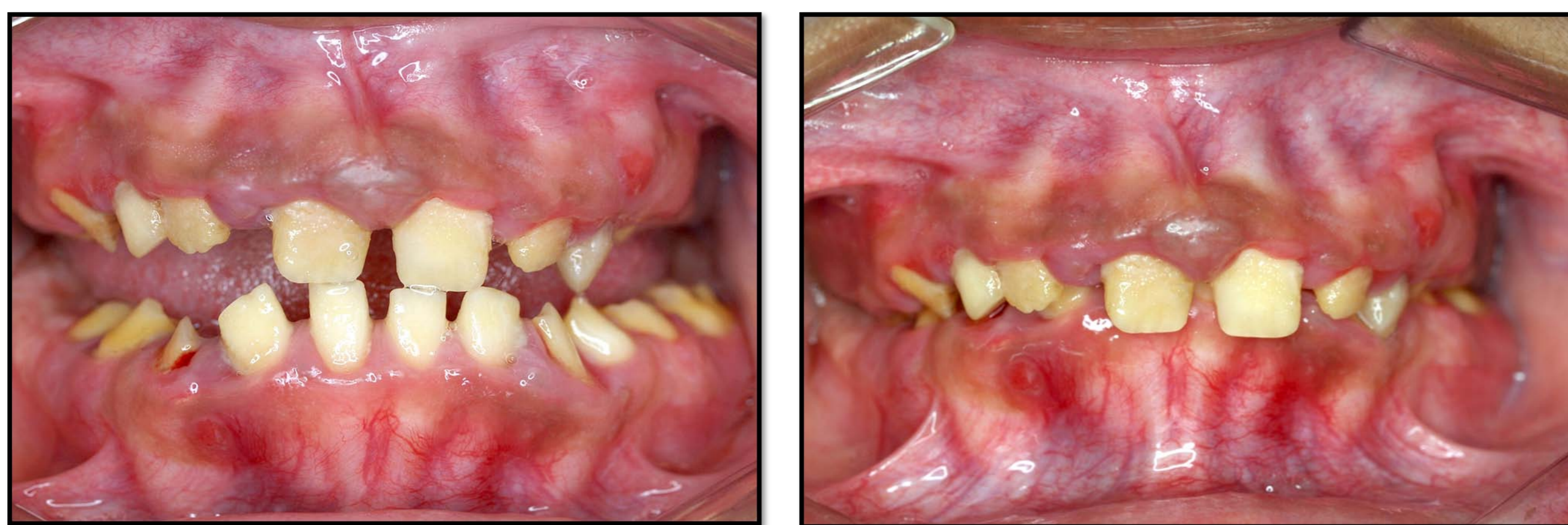


Figure 1: OPG shows enamel contrast similar to dentine, unusual shaped pulp chambers, spacings between teeth and taurodontism of the permanent molars. All permanent teeth including the 3rd permanent molars were found to be present.

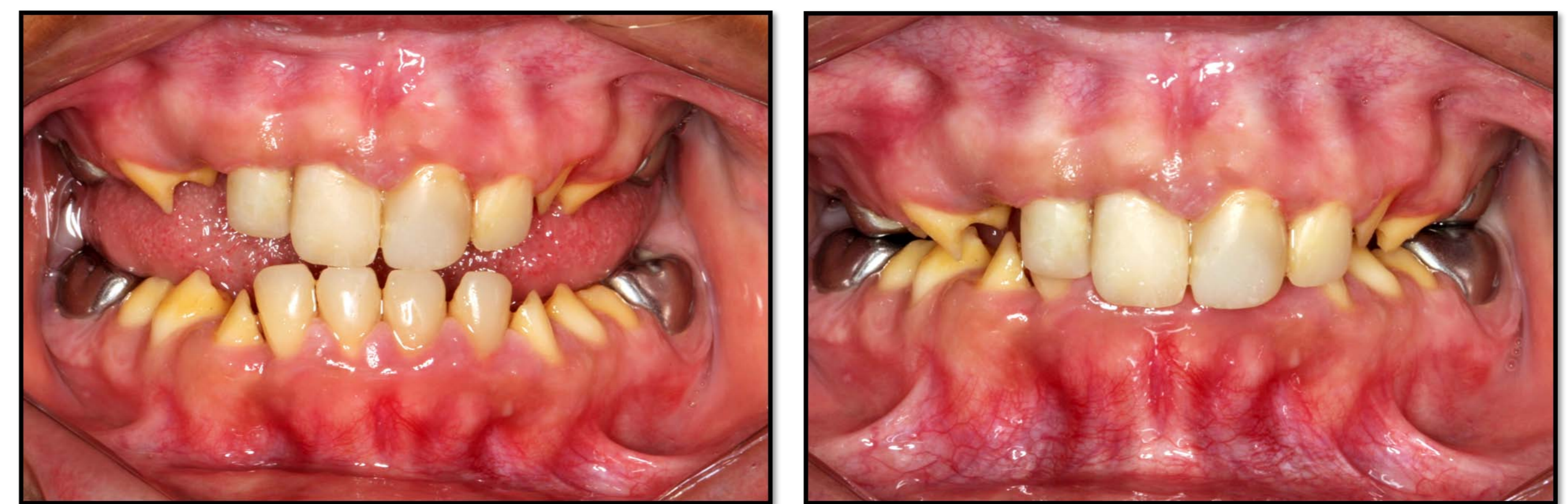


Figure 2: 26 had thin, partially calcified and curved root canals. The palatal canal had a persistent sinus which required several visits to disinfect.

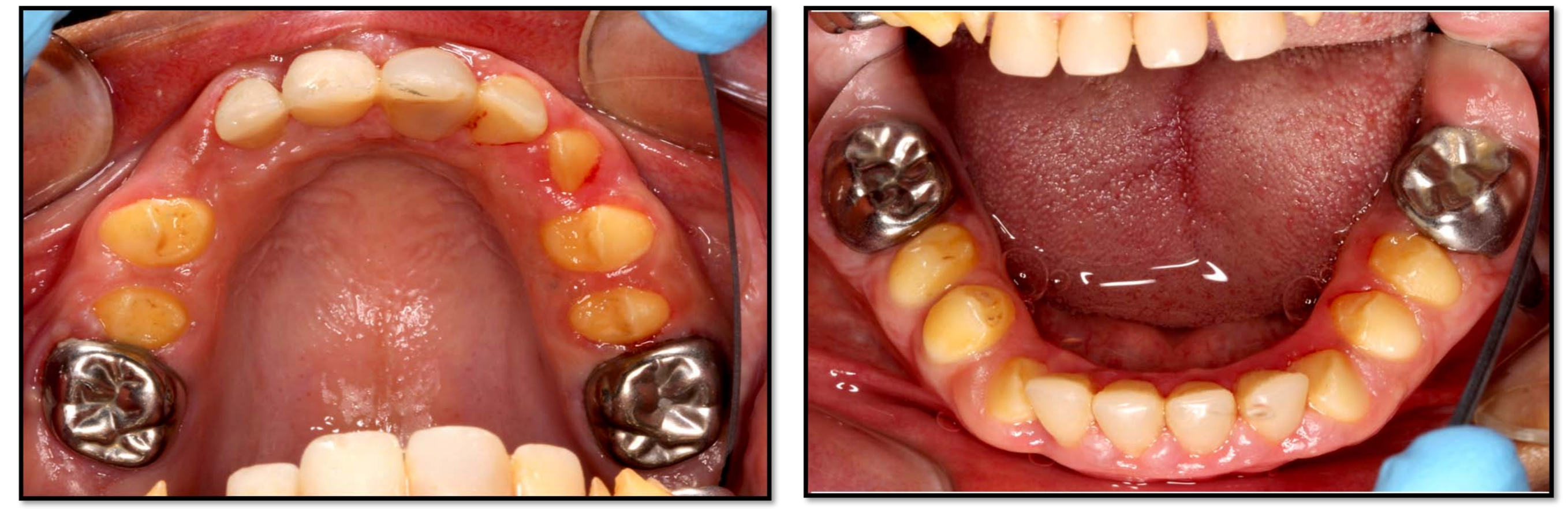
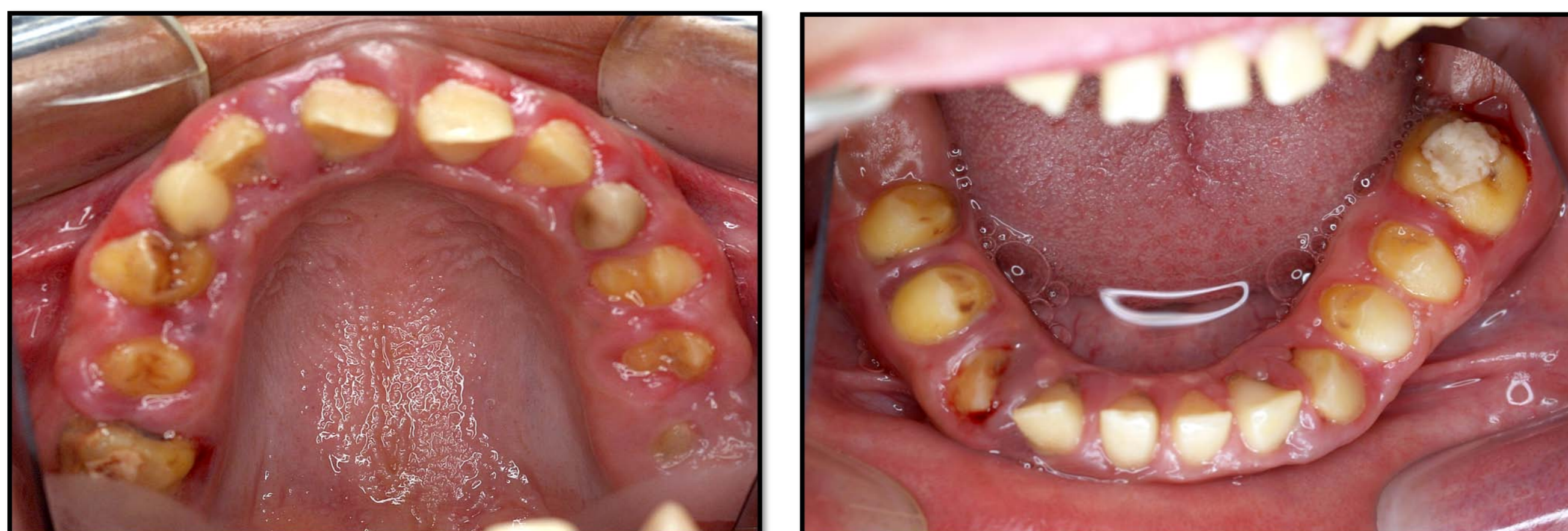
CLINICAL MANAGEMENT



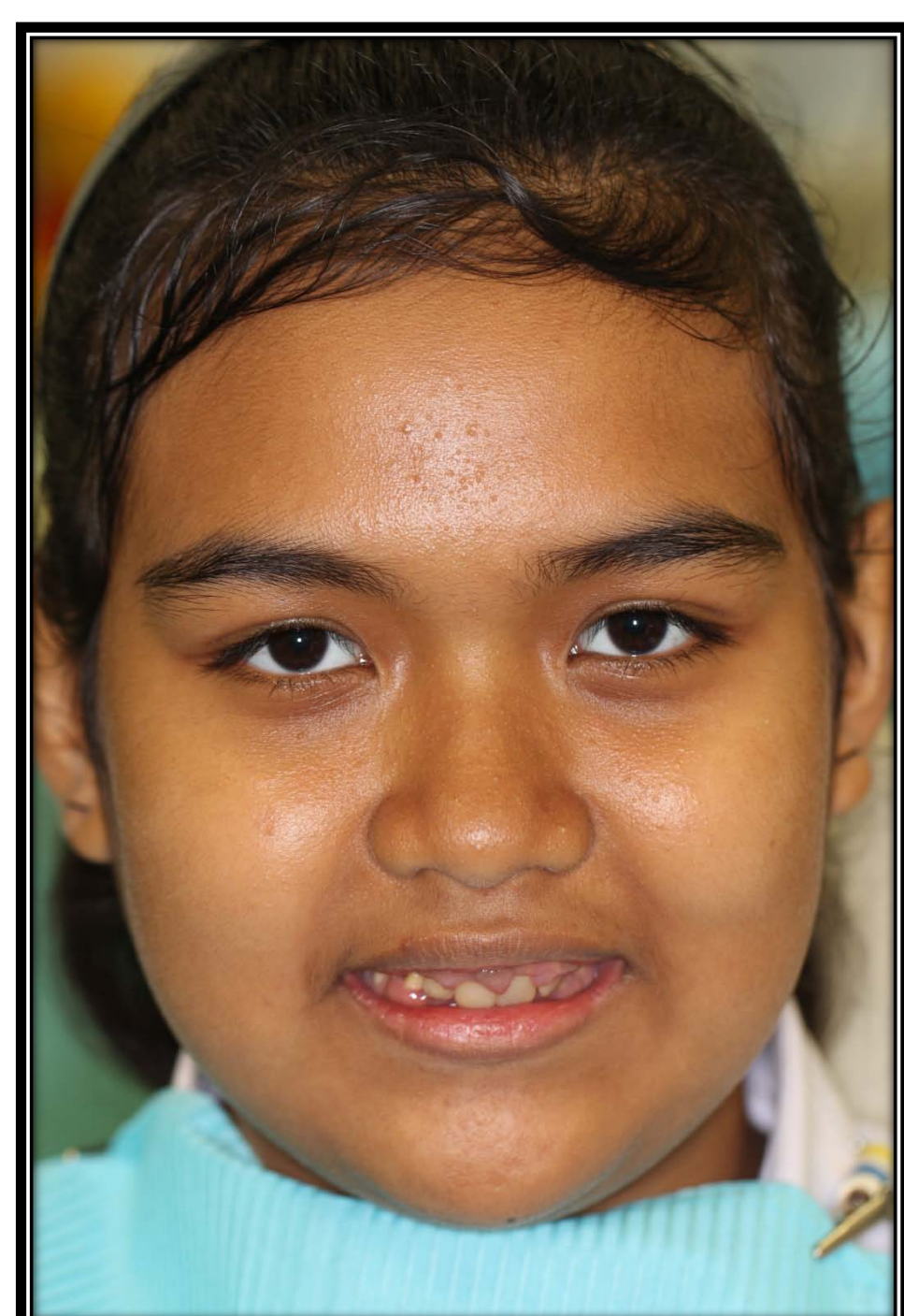
Before Treatment



After Treatment



- ❑ Following a joint periodontal, restorative and orthodontic consultation, treatment commenced with an intensive oral hygiene and periodontal programme which included repeated sessions of scaling and root planing to stabilize her periodontal condition.
- ❑ Extraction of over-retained 53 and 63
- ❑ Gingivectomy was performed to encourage eruption of 26 and 46. These teeth erupted following the surgery.
- ❑ Maxillary anterior teeth: Internal bevel gingivectomy in association with gingivoplasty, followed by advice to use 0.12% chlorhexidine gluconate oral rinses twice a day for two weeks.
- ❑ Full crown direct composite veneers to improve aesthetics on maxillary and mandibular anterior teeth
- ❑ 26 became non-vital prior to full eruption as hyperplastic gingival regrowth compromised access for oral hygiene measures. Cleaning and shaping was carried out using RaCe rotary files. The root canals were obturated with warm vertical technique using System B and backfilled with Beefill.
- ❑ Stainless steel crowns were placed on erupted molars.



DISCUSSION

At patient's request, supragingiva interim composites were placed to temporarily improve aesthetics of central incisors. However, full crown composite veneers were later provided following healing from gingival surgery. To increase retention of composite resin, the teeth were pre-treated with sodium hypochlorite solution (3), followed by longer etching times prior to application of a self-priming dental adhesive.

Subsequent restoration of molars with stainless steel crowns raised the posterior vertical dimension slightly, which allowed further eruption of the premolars.

Follow up treatment will include monitoring of eruption of 13, and cuspal coverage of premolars. Orthodontic treatment will also be considered at this stage.

CONCLUSIONS

Stabilization of periodontal health and patient education is paramount for successful future restorative treatments. Management is aimed at preservation of existing dentition, facilitating the eruption of teeth and exploration of options for rehabilitation of aesthetics and function at a suitable timing.

REFERENCES

1. Brennan MT, O'Connell BC, Rams TE, O'Connell AC. Management of gingival overgrowth associated with generalized enamel defects in a child. *J Clin Pediatr Dent* 1999;23:97-102.
2. Macedo GO, Tunes RS, Motta AC, Passador-Santos F, Grisi MM, Souza SL, Palioto DB, Taba M Jr, Novaes AB Jr. Amelogenesis imperfecta and unusual gingival hyperplasia. *J Periodontol*. 2005 Sep;76(9):1563-6.
3. Venezie RD, Vadiakas G, Christensen JR, Wright JT. Enamel pretreatment with sodium hypochlorite to enhance bonding in hypocalcified amelogenesis imperfecta: case report and SEM analysis. *Pediatr Dent*. 1994 Nov-Dec;16(6):433-6.