CASE REPORT

Orthodontics

Gingival recession with fixed retainer

Sir, a 23-year-old gentleman was referred to the restorative department of a dental hospital regarding localised recession in the lower labial segment. The patient provided consent for publication. The patient was concerned about the appearance of the lower left lateral incisor and was also noting sensitivity to cold. A detailed history revealed that the patient had previous upper and lower fixed orthodontic treatment on a non-extraction basis whilst living abroad ten years previously. He had bonded retainers in the upper and lower anterior segments. The patient reported that the lower retainer had partially debonded and was rebonded by a dentist in the UK approximately four years before this presentation. Medically, the patient was fit

and well and a non-smoker. On examination, mild crowding was noted in the upper and lower arches and there were intact fixed bonded retainers present (upper and lower canine to canine, multistranded stainless steel wire) (Fig. 1). The lower left lateral incisor (32) was significantly retroclined with severe labial recession extending into the unattached gingiva (Millers Class II) affecting almost the entire root length (Fig. 2). There were clinical signs of a chronic sinus evident labially. The lower left canine (33) was notably proclined with gingival overgrowth labially and exposed root lingually. Due to the attachment of the bonded retainer, it was not possible to determine mobility. Both teeth had probing depths extending to the apices. An intra-oral periapical radiograph demonstrated mild bone loss inter-proximally and widening of the periodontal ligaments.

The patient was made aware that the prognosis of the two teeth was likely to be

poor but unpredictable. It was explained that due to the torque discrepancy of these teeth, with the roots positioned outside the cortical bone, gingival augmentation alone would be insufficient. It was proposed that a period of orthodontic fixed appliances would be required to correct the torque and apical positions of these teeth followed by gingival surgery. An alternative treatment option discussed was to have the teeth extracted and replaced prosthodontically.

This case serves as an example of the potentially severe complications associated with bonded multistrand retainers. The extensive nature of the recession in this case is likely to have occurred either as a consequence of the wire being placed in a non-passive position creating a torquing effect on these teeth, or potentially due to the multi-stranded wire unwinding over time. Previous literature proposed that this could occur due to a number of factors including:¹ improper bonding, wire deformation due to trauma or even soft tissue habits.

Bonded retainers should be placed in a passive position with a suitable material. This case highlights the necessity to review patients with bonded retainers regularly.

N. McInnes, O. Carty, Liverpool, UK

Fig. 1 Mild crowding was noted in the upper and lower arches and there were intact fixed bonded retainers present

Fig. 2 The lower left lateral incisor (32) was significantly retroclined with severe labial recession extending into the unattached gingiva (Millers Class II) affecting almost the entire root length

Reference

1. Shaughnessy T G, Proffit W R, Samara S A. Inadvertent tooth movement with fixed lingual retainers. *Am J Orthod Dentofacial Orthop* 2016; **149**: 277-286.

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