

Case Study 8.9 (Fig. 8.35)

Patient: D.F.H., male, age 16.

Diagnostic records: models, panoramic radiograph, lateral cephalometric radiograph, intraoral/extraoral photographs.

Main findings: mandibular second molars mesially impacted.

Treatment aims: uprighting of teeth 37 and 47.

Appliances: self-ligating molar tubes, uprighting springs, miniscrew implant.

Alternative treatment strategy: extraction of teeth 37 and 47 with alignment of teeth 38 and 48.

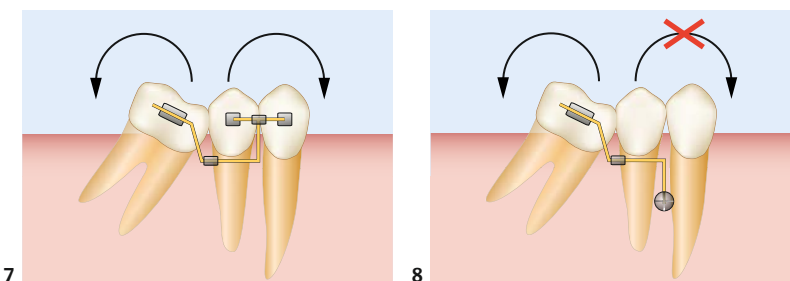
Active treatment time: 8 months.

Retention: three-dimensional retention with a Hawley retainer.

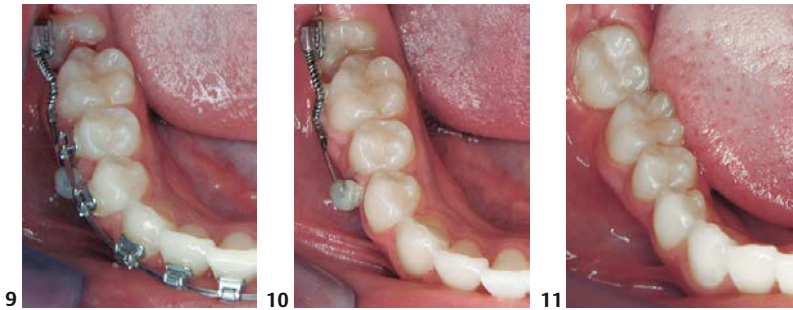


Fig. 8.35 1–15

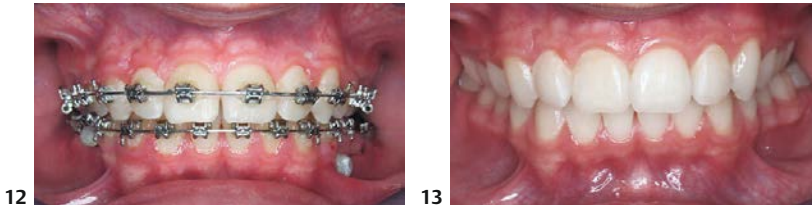
1–6 Well-progressing treatment with self-ligating brackets. The progress panoramic radiograph shows mesially impacted mandibular second molars. After extraction of teeth 38 and 48 and surgical exposure of teeth 37 and 47, brackets were bonded and miniscrew implants were placed to allow molar uprighting with an uprighting spring and to avoid reciprocal side effects. The springs were activated to allow distalization and uprighting at the same time.



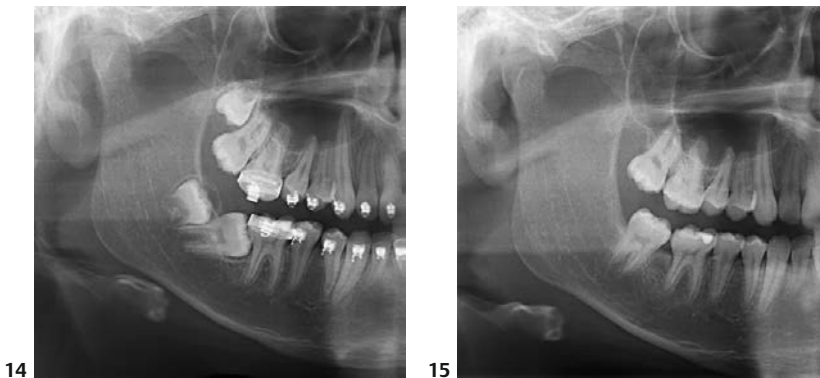
7, 8 Uprighting a molar creates momentum that may have an undesired effect on the anterior dentition. Use of a miniscrew implant can absorb the undesired reciprocal momentum.



9–11 The initial uprighting phase (9). The front teeth of the patient were debonded after alignment of the dentition was completed (10). Posterior sectional mechanics were used for continuation of the molar uprighting. A mini-implant which was inserted between 44 and 45 was used for anchorage.



12, 13 The miniscrew implant absorbs reactive forces and prevents negative biomechanical effects on the anterior dentition during molar uprighting.



14, 15 Panoramic radiographs before and after successful molar uprighting.

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