Case Report

Uprighting Impacted Mandibular Second Molar

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Abstract

Impaction of the lower second molar is a common problem, and a very challenging one for the orthodontist. Here is a case report of uprighting of a mesioangular impacted mandibular left permanent second molar.

Key words: impacted second molar, uprighting.

Introduction:

Impacted or lingually tilted molars require uprighting. There are several approaches by which molar uprighting can be accomplished, like Australian uprighting spring, cantilever spring, push spring appliance, NiTi coil spring, Mini implant, forced eruption by elastics, traction from removable appliances, surgical uprighting etc

The ideal procedure employed should allow the establishment of normal functional occlusal relationship without causing periapical or periodontal pathology.

Case Description:

A 14 year old female patient reported to the department with the chief complaint of irregularly placed upper front teeth. On clinical examination, the patient had convex profile with competent lips, prominent nose and chin button. Intra oral examination revealed an end on canine and molar relation. Cephalometric...
analysis revealed Class I jaw bases with horizontal growth pattern and average inclination of upper and lower incisors. OPG radiograph revealed mesioangular impaction of lower left second molar.

**Treatment Plan:**

Considering the profile of the patient and the minimal amount of crowding, it was decided to treat the case with non extraction mode of therapy. Uprighting of lower left second molar was considered after enucleation of third molar on the same side. Pre-adjusted edgewise appliance of MBT prescription (0.022 slot) was used.

**Treatment Sequence:**

Upper and lower arches were strapped up with PreAdjustedEdgewise appliance. Upper TransPalatalArch and Lower lingual arch was placed for reinforcement of anchorage. The routine wire sequence was followed. When the patient was on 17 X 25” Stainless steel wire, a Begg bracket was bonded on the occlusal surface of the impacted lower left second molar after proper isolation. A Molar uprighting spring was fabricated using a 0.016” A J Wilcock Premium Stainless steel wire. In order to prevent occlusal interference, composite bite raiser was given.

After 4 months of uprighting with the molar uprighting spring, the lower left second molar was banded and a 0.016” round sectional NiTi was engaged through first and second molar tubes. Once the alignment was completed, a continuous archwire passing from second molar on the right to second molar on the left was placed.

**Discussion:**

This case report describes a new method of uprighting molars which is simple, efficient and less time consuming. Molar uprighting usually presents difficulty in managing the unwanted reactionary force vectors associated, which if not taken care can produce deleterious effects on areas of dentition employed for anchorage.

Uprighting tipped molars can benefit patients functionally, periodontally and for prosthodontic
rehabilitation of mutilated cases. The specific benefits to be gained depend on the directions in which the molar moves, both in the vertical and mesio-distal planes of space.

The periodontal advantages of uprighting a mesially tipped molar include elimination of the pseudopocket that often forms on the mesial aspect of these teeth. Eliminating this pseudopocket may improve the patient’s ability to control plaque accumulation in that area\textsuperscript{11-12}.

The advantages of using this type of molar uprighting spring over other methods of uprighting are increased flexibility, increased range of action, ease in activation and reactivation, simple design and easy chairside fabrication. The mechanical advantage is that this spring is engaged from the gingival aspect of the first molar to the occlusal aspect of the second molar negating the extrusive effect.

**Conclusion**

Considering the biomechanical aspects as demanded by the clinical situation, employing the best of the various treatment options available, a simple method of uprighting, like the one described above can be used along with the regular treatment mechanics for molar uprighting.
Figure 4: After engagement of molar uprighting spring; composite resin bite raiser given to gag the bite

Figure 5: During treatment photographs

Figure 6: Post treatment extraoral photographs

Figure 7: Post treatment OPG showing uprighted lower left second molar

References

3. Roberts, W.W.; Chacker, F.M.; and Burstone, C.J.: A segmental approach to mandibular molar
13. Dong Kuen Park Australian Uprighting Spring for partially impacted molars 1999;33;7;404-405