

The 'Downsliding' Osteotomy; Highlighting an under-used Surgical Technique to Manage Vertical Maxillary Deficiency

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Abstract

Vertical 'down grafting' of the maxilla is routinely performed using orthotopic bone graft or heterotopic donor bone products. It is well documented that with this approach, bone grafting does not always result in a favorable stable outcome as relapse commences before complete integration of the graft¹.

We wish to highlight the 'down sliding' osteotomy, first described by Reyneke in 1985², which allows anterior and inferior movement of the maxilla after a 'z' shaped Le Fort 1 osteotomy is performed. Bony contact is preserved at the medial pyriform and lateral maxillary buttresses as the maxilla displaces down a sloping plane, thereby obviating the need for bone grafting. We demonstrate how to decide whether a patient is suitable for this technique by utilizing Visual Treatment Objective Schematics prior to the commencement of pre-surgical orthodontics.

The 'down sliding' osteotomy is straightforward and reliable technique. It avoids the necessity of a donor surgical site, thereby minimizing operating time and hospital stay. We believe that the 'down sliding' osteotomy is a highly cost-effective yet under-used surgical technique which should be contemplated for suitable cases.

References

1. Wagner S, Reyneke JP. The Le Fort I downsliding osteotomy: a study of long-term hard tissue stability. *Int J Adult Orthodon Orthognath Surg*. 2000; 15 (1): 37-49
2. ReynekeJP, Masureik CJ. Treatment of maxillary deficiency by a Le Fort 1 downsliding technique. *J Oral Maxillofac Surg*. 1985; 43 (11): 914-6