

Utilization of inverted L osteotomy for correction of dentofacial deformities in patients with significant cardiac history

Kayvan FATHIMANI *, Chun PAE CHO, Rawle PHILBERT

Department of Oral and Maxillofacial Surgery, Lincoln Medical and Mental Health Center, Affiliated with Weill Cornell Medical College, Bronx, NY, USA

*Corresponding author: Kayvan Fathimani, Department of Oral and Maxillofacial Surgery, Lincoln Medical and Mental Health Center; Affiliated with Weill Cornell Medical College, 234E 149th St, Suite 2A8, Bronx, NY, 10451, USA.

ABSTRACT

A significant amount of orthognathic procedures are completed on a yearly basis on healthy individuals. Patients with multiple comorbidities are more restricted to having extensive elective surgery. One particular subset includes patients with cardiac history. Concern for acute blood loss and need for hypotension are just a couple reasons surgeons and anesthesiologists avoid orthognathic surgery in this group of patients. Downfracture of a LeFort 1 osteotomy requires hypotension to minimize blood loss; however, patients with cardiac history may not be able to tolerate hypotension without the concern of decreased cerebral perfusion and increased stroke risk. Hence, avoidance of a LeFort 1 osteotomy would be beneficial for these groups of patients. This case report provides an alternative method to perform corrective jaw surgery safely with inverted L osteotomies in patients with elevated risk of cardiac complications. Our patient was selected for routine orthognathic workup to correct his dentofacial deformity. The patient had a class III malocclusion and a history of cardiac disease. LeFort 1 osteotomy was avoided in the patient. The patient had an inverted L osteotomy with a large genioplasty advancement. Overall surgical time was less than 3.5 hours. There was no acute bleeding episodes and the patient had a total blood loss of less than 100 cc. His recovery was uneventful. Avoidance of a LeFort 1 osteotomy in large dentofacial deformity corrections in patients with cardiac disease can be overcome predictably and safely with the use of an Inverted L osteotomy.

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