DELAYED NON-UNION AS A COMPLICATION AFTER LE FORT 1 OSTEOTOMY

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CASE 1 PREOPERATIVE

CASE 2 PREOPERATIVE













CASE 1 POSTOPERATIVE



CASE 2 POSTOPERATIVE









EXCESSIVE MAXILLARY ADVANCEMENTS

INTRODUCTION

Delayed union or non-union of superior maxilla after orthognatic surgery is a rare complication. This is an non-desirable scenario in bone fracture consolidation. Compromised blood supply and uncorrectly performed osteosynthesis are various of the predisposing factors. Computerized tomography (CT) is useful to detect the percentage of union in between neighboring bone segments. The correct treatment consists of removing all fibrous tissue from osteotomy lines and shaving the bone surface to expose fresh bone, secure mecanical stability and adequate blood supply and finally autogenous bone grafting.

OBJECTIVES

Introduction to two clinical cases:

CASE 1: 33-year-old female patient with medical history of asthma treated with β eta2-agonist which presents Class III dentofacial deformity. A LeFort I osteotomy for advancement of 6 mm is performed. After 4 years of surgery the patient presents maxillary mobility, particularly in the anterior area, compatible with non-union or pseudoarthrosis after realization of diagnostic imaging.

CASE 2: 61-year-old female patient, ex-smoker, subjected to a bimaxillary orthognatic surgery with mentoplasty. 15 years after surgery presents painless mobilization of superior maxilla during mastication. Physical examination and radiological findings confirmed the delayed non-union diagnosis.

RESULTS

In both cases the mobility of the middle third of the facial skeleton was due to a non-union of the upper jaw. Diagnosis of aseptic pseudoarthrosis with stable occlusion is confirmed. Surgical reintervention is decided for both patients for the definitive management of this complication, using in both cases the same surgical technique: fractured plate removal and non-union focus curetagge. Biological stimulation was obtained with iliac bone grafting based on onlay mono-cortical bone plates and interpositional inlay cancellous bone in osteotomy gaps.

CONCLUSION

The risk of non-union as a mid-term complication is increased by several factors: Inadequate maxillary stabilization due to an inadequate surgical technique and macromotion by oclussal prematurities.

Excessive maxillary advancements with unfavorable vascularization.

Patients with systemic illnesses which delay postoperative healing.

An adequate treatment requieres the use of corticocancellous bone plates from iliac crest to achieve a *restitutio ad integrum* from the non-union focus.

CONFLICT OF INTEREST

The authors declare no conflict of interest.