



MANDIBULAR OSTEOSYNTHESIS FAILURE. BIOMECHANICAL CONSIDERATIONS AND MANAGEMENT.



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INTRODUCTION

There are many causes of mandibular osteosynthesis failure, some referring to an inadequate treatment plan and surgical technique and other causes related to the intrinsic conditions of the fracture and the systemic condition of the patient.

The goals of treatment of maxillofacial fractures are:

1. Anatomical reduction of the fracture.
2. Stable osteosynthesis to satisfy local biomechanical stresses.
3. Low traumatic surgical technique.
4. Active, painless and early mobilization

A 49-year-old male without chronocodgeneratives, refers 6 months ago ORIF of right jaw body fractures and left subcondyle. Currently with disocclusion and pain to chewing.

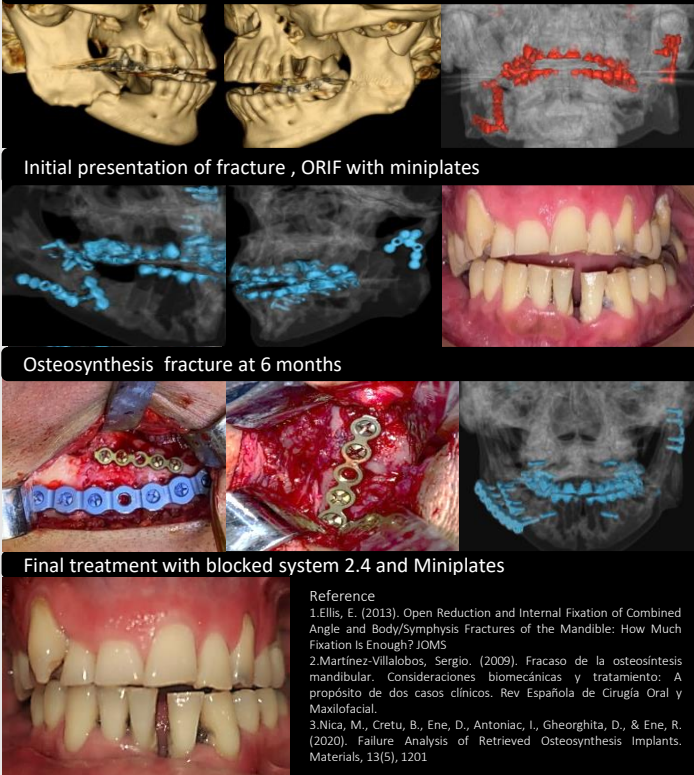
OBJECTIVE:

Analyze the possible causes of mandibular osteosynthesis failure when appropriate initial treatment has been instituted.

RESULTS:

Fracture of osteosynthesis miniplates was found with avascular pseudoarthrosis managed by placement of load bearing osteosynthesis.

TREATMENT SEQUENCE



DISCUSSION

Aspects to consider:

- Biomechanics of the chewing musculoskeletal system, whole and deteriorated.
- Fracture: 1 or more lines, displacement, comminution, bone defect, infection, edentulism, associated condyle fracture.
- Patient: age, dentition (occlusion-hygiene) habits, systemic condition, social standard (collaboration).
- Concepts of load bearing and load sharing of osteosynthesis/ rigid fixation, non-rigid and functionally stable.
- Anatomical reduction and proper implant positioning.
- Surgical technique.

CONCLUSION

It is necessary to make an analysis of all the aspects involved in the failure of the mandibular fracture treatment. Thus the presentation of a complication can be solved efficiently and future ones can be anticipated.

Declaration of conflict of interest for author(s)

The authors declare no conflicts of interest.