INTRODUCTION

- Arthrosis or osteoarthrosis of the temporomandibular joint (TMJ-OA) is a degenerative disorder involving the joint and is the most common non-inflammatory disease of the TMJ, characterized by deterioration of articular tissue with concomitant osseous changes in the condyle and/or articular eminence(1). The biological linkage between the progressive degeneration of the articular cartilage of the TMJ and the occurrence of orofacial pain is still largely unknown. For this reason, clinical treatments of TMJ-OA are focused, in a first stage, on the relief of orofacial pain with Symptom Modifying OsteoArthritis Drugs – DMOADs (e.g., analgesic medications, NSAIDs, steroid injections or Symptomatic Slow Acting Drugs for Osteoarthritis) and finally, if the pain continues, in a surgical intervention.

- Which the aim to optimize conservative management and avoid or delay surgical intervention, recent studies suggest to use Disease Modifying OsteoArthritis Drugs - DMOADs in order to maintain the cartilage homeostasis of the synovial joints and shift the metabolic status from catabolic to anabolic using intra-articular injections with, for example, Hyaluronic Acid (HA)(2), Platelet Rich Plasma (PRP) or Plasma Rich in Growth Factors (PRGF) (3), Autologous Conditioned Serum (ACS) (4) or stem cells (5).

MATERIAL AND METHODS

- A systematic review of the relevant literature performed by us seems to confirm that autologous intra-articular therapies with ACS, rich in growth factors (e.g. TGF-β, IGF-1, etc) and anti-inflammatory cytokines (e.g. Interleukin-1 Receptor Antagonist - IL-1Ra), or PRGF, mainly rich only in growth factors, show clinical improvements in TMJ-OA patients. Therefore, strong evidence-based data are needed to identify the best ACS/PRGF preparation protocol (e.g., platelet concentration, timing and volume for injection, combination with arthrocentesis, etc) according to the physiological conditions and clinical diseases of the patients (e.g., inflammatory-degenerative disorders, arthralgia, closed lock, other internal derangements, etc) (6).

CASE REPORT

- This case report describes an unsuccessful orthognathic surgery treatment of a skeletal Class III malocclusion with mandibular prognathism and asymmetry in a 26 year old male.
- Six months after surgery the patient developed pain at left TMJ, appearing an osteoarthritic condylar process. The case was treated conservatively with a stabilization splint and 4 intra-articular TMJ injections (1 every 3 weeks) with 2 ml of ACS-Orthokine®.

Before surgery 6 month after surgery 1 year after ACS injection

Software superimposed CBCT scans ramu images pre (green) and post-ACS injections (red), showing bone growth in the upper condylar heat.

REFERENCES