LINGUAL ORTHODONTICS IN PATIENT WITH TMJ DISORDERS: CASE REPORT

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Aim: techniques and materials evolution had brought a continuous research for new orthodontic appliances more aesthetic and invisible. For this reason at the early stages of the 80's, most of the pratictioners have been seduced by lingual orthodontic. But the difficulties in the technique have rapidly given a disappointment.
Aim of our study is the demonstration of the simplicity of the use of this appliance and its advantages in the resolution of II Class malocclusions.
Materials and methods: a 20 year old patient came at our observation with I class malocclusion in a II class facial type with a severe deep bite, crowding in the lower arch, deep curve of Spee and TMJ disorders. He asked for an aesthetic treatment.
Our treatment goals were to achieve good dental relationships changing the incisors inclination but most of all solve his TMJ disorders.
We used a system CLASS indirect bonding after the set-up of the models. We bonded both arches and Ni-Ti and stainless steel round size arches we used for the levelling of the arches. Then we passed to rectangular size TMA and stainless steel arches for the torque control. After 18 months we debonded the patient.
Results: this technique gave us the opportunity to bond both arches at the same time because anterior brackets had bite planes so occlusal interferences weren't a problem anymore. For this reason the treatment progress was faster than vestibular ones because we could work on both arches since the beginning.
These bite planes helped the intrusion of upper incisor and an easier resolution of deep bite both for a direct force of the lower incisors and for a better control of molar extrusion. Another advantage of lingual mechanoterapy is a better control of forces because the bracket position is closer to the centre of resistance of the tooth.
No damage to labial or buccal surfaces of the teeth, no labial or buccal gingival hypertrophy or gingivitis because the patient was instructed for a correct brushing method.
At the end of treatment because of a correct repositioning of the jaw the patient did not refer any TMJ problems.
Concusions: the development of new materials and increasing of aesthetic care brought more attention on invisible appliances.
In our clinical experience we can say lingual appliances are a valid technique especially for its biomechanical advantages even if needs great manuality. To obtain good results it is necessary high work quality in laboratory procedures and in chair time bonding and arch wire modelling.