

73EOS97



**73rd Congress of the
European Orthodontic Society**

June 9-14, 1997

VALENCIA, SPAIN

European Orthodontic Society

President: José A. Canut

ABSTRACTS

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THE VELTRI TYPE RAPID EXPANSION APPLIANCE

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AIM: To describe the 'rapid expander' disjunctor of median palatine suture which is used to correct upper maxillary narrowness.

SUBJECTS: Thirty one children of pre-school age requiring treatment for clinical reasons.

METHODS: The 'Veltri type' rapid-dynamic expander is anchored to two teeth only by bands to 55 and 65 for pre-school-aged children, and to 16 and 26 for school-aged children and adults. These bands are soldered to a double-barrel conjuctor equipped with a central double screw which is 6, 8, or 12 mm long according to the degree of required expansion. The screw is activated one-quarter turn three times a day, which is equal to 0.75 mm a day for 8, 10 or 12 days to obtain a rapid palatal expansion.

RESULT: During 14 years of clinical use the appliance has been used in 2856 subjects, children and adults, to obtain expansion. In the treatment of the 31 school-aged children it was necessary to anchor the 'Veltri type' rapid expander to the first two molars of the deciduous dentition (54-64). This was due to a variety of reasons including the nearly complete destruction of 55 and 65 due to decay, or the incomplete eruption of the first molars (16 and 26) in the permanent dentition, or both.

CONCLUSIONS: The application of the 'Veltri type' rapid-dynamic expander, with two anchor points, results in good palatal expansion without alveolar dental transposition, followed by automatic uprighting of the teeth.

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AESTHETIC AND FUNCTIONAL IMPROVEMENTS IN THE SURGICAL-ORTHODONTIC THERAPY OF SKELETAL OPEN BITE

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AIM: To describe a diagnostic and therapeutic method for correction of open bite in subjects with skeletal Class III malocclusions.

SUBJECTS: This study was carried out on 37 patients divided into two experimental groups: the former included 27 patients, 14 men and 13 women, aged 18 to 35 years, at the end of the growth, who had undergone surgical/orthodontic treatment, and the latter 10 patients, 6 males and 4 females, aged 6 to 14 years, in the active period of the growth, treated only orthodontically.

METHODS: The treatment consisted of presurgical-orthodontics to eliminate dental compensation of skeletal discrepancies, align the teeth and produce compatible arch forms, surgical correction of three-dimensional maxillo-mandibular relationships followed by final orthodontic correction. The most original procedure described in this work is the use of electromyography and kinesiography at the beginning and end of treatment to reach a correct diagnosis, to evaluate the efficacy of the therapy, and to eliminate the reasons for relapse and the appearance of TMJ dysfunction.

RESULTS: In the first group an excellent result was obtained from the aesthetic, dental, skeletal, neuromuscular and functional point of view. In the second group, the aesthetic-morphological result was very good, although skeletal open bite was only partially corrected. However the functional result was not satisfactory.

CONCLUSIONS: The therapeutic approach to these malocclusions must begin at the end of growth by three-dimensional surgical-orthodontic treatment on both jaws. The success of orthodontic-surgical therapy can be obtained by the elimination of the muscular forces on the teeth, so the problem of relapse becomes minimal. Electromyographic and kinesiographic assessment can place the jaws both orthodontically and surgically in a muscular and articular position, compatible with the dental occlusion.