Cleft lip and palate midfacial hypoplasia: Treatment algorithm

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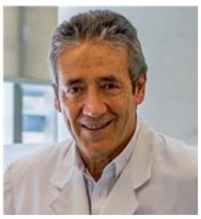

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Abstract :

A series of skeletal and dentoalveolar/occlusal criteria were proposed for choosing the treatment modality for the management of midface hypoplasia in cleft lip/palate (CLP) patients, focusing on functional improvement, aesthetics, and minimizing the risk of recurrence and secondary alterations.

For wich, 42 patients with non-syndromic CLP, all with previous primary lip/palate surgeries and without previous osteotomies, were analyzed. Orthognathic-surgery (OS) (n=24) and maxillary distraction osteogenesis (DO) (n=18) with anterior segmental osteotomies (SD), alveolar transport disc (TD), and midface total distraction (TDO) by modified Le Fort III osteotomy was done.

The average of maxillary advancement for OS was 5.58 mm ±0.83, for SD 9.4 mm ±0.89, for TD 8.00 mm ±1.00, and for TDO was 8.13 mm ±1.55

In the presence of infraorbital and/or zygomatic hypoplasia, TDO was performed using skeletal anchorage, with the requirement of occlusal stability in dental cast in occlusion. In short maxillary arch without dental cast feasibility in occlusion, hypodontia/agenesis or absence of premaxilla, TD and SD was performed. There was only 1 mm of recurrence in one patient of each group. Changes in speech were detected in two patients in the OS group (8.3%). OS can be indicated for advancements ≤7mm not requiring orbito-zygomatic advancement, while DO can be indicated for advances >8mm with or without the need for orbito-zygomatic advancement, in addition with other dentoalveolar factors and velopharyngeal function.