Discussion


Drs Arpornmaeklong et al are to be congratulated on an excellent study evaluating the stability of the maxilla following Le Fort I osteotomies. The authors evaluated 26 patients who underwent maxillary advancement through Le Fort I osteotomies with a minimum follow-up of more than 1 year. Of these 26 cases, 11 were one-piece Le Fort I osteotomies, and 15 were segmental Le Fort procedures. The segmental osteotomy was performed through palatal osteotomies and interdental osteotomies to maximally improve postoperative occlusal relationships. Linear and angular cephalometric measurements of the maxilla, as compared with the skull base, were used for comparative data in this study. It is important to note that all of the patients in the study were non-cleft, nonsyndromal patients. All patients underwent rigid internal fixation with simultaneous maxillary bone grafting to maximize stability. For the patients undergoing segmental osteotomies, palatal splints were used post-surgically, and all patients underwent several weeks of elastic therapy.

The data reported by the authors confirms that of other studies as well. For the group, the mean maxillary advancement was approximately 5 mm, and the authors found an approximate 12% horizontal relapse rate for these patients. The authors stated that, at the occlusal level, this relapse rate was clinically insignificant as the small skeletal change was compensated at the dental level. This dental compensation occurred both spontaneously as well as with the use of post-surgical orthodontic treatment. In the vertical plane, an almost 50% relapse rate was experienced in this group of patients. As the authors have pointed out, this is probably related to the chronic musculoskeletal-masticatory forces over time. It is interesting that the authors found greater skeletal stability with segmental osteotomies than with the non-segmental osteotomies. This is likely because of the improved occlusal stability found with the interdental osteotomy group, which enhances skeletal stability.

The confirmatory data presented on skeletal stability for this group of patients is important information in maxillofacial surgery. Great caution needs to be exercised, however, when translating this data to other groups of patients undergoing Le Fort I or midface advancements. Maxillary advancement in the horizontal plane in this group was relatively small (approximately 5 mm). For patients undergoing greater advancements, it is well documented that greater sagittal relapse can be anticipated. In addition, it is important to note that none of the patients in this group were syndromic patients. For syndromic patients, and in particular cleft lip and palate patients, both sagittal and vertical relapse rates can vary dramatically from that reported in this article. Typically in the cleft population, the amount of sagittal and vertical movements that patients require is much greater than that presented in this study. In addition, this group of patients had other complicating problems of facial soft tissue scarring, residual fistulas, as well as absence of bone related to the cleft deficiency. It is in these more difficult cases that traditional surgery can often fall short of expectations and other modalities, such as distraction osteogenesis, can have a great benefit.

Again, the authors are to be congratulated on an excellent study, and we look forward to seeing further data from this group.

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This Discussion should have appeared in the January 2003 issue of The Journal of Craniofacial Surgery. We regret the omission.