The M-Arch Model

The tripod concept has proved to be a valuable model in understanding nasal tip dynamics. Peter A. Adamson, MD, FRCSC, and colleagues propose the M-Arch Model, which expands the nasal tripod concept by considering the nasal tip tripod in its entirety as an arch. This novel model stresses the importance of the overall length of the medial, intermediate, and lateral crural segments as they form a cartilaginous arch. They describe various maneuvers to alter the length of the arch at any point along its course, which in turn exerts change on nasal tip length, projection, rotation, and lobular refinement. This new concept of nasal tip dynamics represents a useful tool for understanding and planning surgical techniques designed to refine the nasal tip.

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Mandibular Lengthening in Micrognathic Infants With the Internal Distraction Device

Infants with Pierre Robin sequence invariably have upper airway obstruction caused by micrognathia and glossoptosis. Recent treatment strategies have focused on mandibular distraction osteogenesis as an alternative to tracheotomy. Saswata Roy, MD, and Pravin K. Patel, MD, report their experience treating 8 infants with isolated Pierre Robin sequence who underwent mandibular lengthening with internal microdistractors. They were able to decannulate 3 patients with preexisting tracheostomies within 6 months after distraction. The other 5 infants had internal distraction as their primary treatment and avoided tracheostomy. This study shows promise for the use of internal distraction osteogenesis as an alternative to tracheostomy in the treatment of tongue base obstruction in infants with Pierre Robin sequence.

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Internal Brow Elevation at Blepharoplasty

Brow-lifting techniques, including those performed through a transblepharoplasty approach, typically involve some method of periosteal fixation. John R. Burroughs, MD, and colleagues present a review of 1000 patients who underwent internal brow elevation without periosteal fixation. A thorough review of the pertinent anatomy, as well as the surgical technique, is described. The authors emphasize releasing the orbital ligament and sculpting the ptotic brow fat pads to produce elevation without the need for suture fixation. The complications seen with fixation (ie, restriction of brow movement and skin dimpling) were avoided. All patients experienced some degree of temporary forehead hypesthesia; however, long-term sensory complaints were reported in only 2 patients.

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Quantitative Assessment of Nasal Changes After Maxillomandibular Surgery Using a 3-Dimensional Digital Imaging System

Patients undergoing orthognathic surgery invariably incur changes to the soft tissues of the nasomaxillary area. Carlo P. Honrado, MD, and colleagues present the use of 3-dimensional digital imaging techniques to measure nasal changes after maxillary advancement surgery, with and without rotation. Thirty-two patients who underwent 1 of 3 types of maxillary advancement surgery had preoperative and postoperative measurements performed for interalar width, internosorial width, nasal tip projection, columellar length, and nasolabial angle. Statistically significant changes in interalar and internosorial width were noted in all 3 groups. No significant change in nasal projection or columellar length was calculated. A decrease in nasolabial angle was noted in the group that underwent maxillary advancement with impaction (upward rotation). This study demonstrates the use of 3-dimensional imaging in the planning, execution, and postoperative assessment of patients undergoing orthognathic surgery.

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This issue’s Highlights was written by Bryan Ambro, MD.