Fernando D. Burstein, MD, FACS, FAAP
Associate Clinical Professor Emory University Division of Plastic Surgery, Director Children's healthcare of Atlanta Center for Craniofacial Disorders, Atlanta, Georgia

Correspondence:
Fernando D. Burstein MD
Suite 500, 975 Johnson Ferry Rd,
Atlanta, GA 30342
E-mail. F.Burstein @aol.com

Airway Obstruction After Rhinoplasty: Prevention and Correction

Aesthetic and reconstructive rhinoplasty may result in an inadvertent decrease in nasal airway patency leading to patient dissatisfaction. Recognition of patients who are at risk for airway compromise, coupled by knowledge of surgical measures that can be incorporated into the surgeon's armamentarium can enhance both the functional and aesthetic results of rhinoplasty. Thorough, systematic initial evaluation of the nasal airway and familiarity with surgical techniques that can be used in primary and revisional rhinoplasty to preserve or enhance the nasal airway maximizes the chances for a favorable outcome. Preoperative evaluation can reveal patients with preexisting weakness in cartilaginous airway support which may result in airway collapse with negative inspiratory pressures. In addition, patients may have significant fixed obstructions at the nasal inlet, septal or mid-vault levels. Proper diagnosis and treatment planning allows the surgeon to incorporate septoplasty, turbinectomy, pyriform aperture enlargement, alar spreader grafts, batten grafts and collumelar grafts as needed into their rhinoplasty technique. Properly applied these techniques can enhance the overall aesthetic results while preserving or improving nasal airway patency.

Initial evaluation includes external and internal nasal evaluation and a thorough history. When necessary rhinommetry and flexible nasal endoscopy and CAT scanning can yield additional physiologic and anatomic information. Septal deviation and turbinate hypertrophy are noted. If significant, submucous septal resection and partial inferior turbinectomy are incorporated into the rhinoplasty operative plan. This is important in reductive rhinoplasty since decreasing dorsal height, narrowing of the nares, lateral osteotomies, and tip reduction can all contribute to increased nasal airway resistance. Alar valve collapse can be easily diagnosed by occluding one nares during inspiration and observing for lateral alar collapse. The maneuver is repeated with cotton tipped applicator supporting the nasal valve. If airflow is improved with this maneuver alar spreader or batten grafts may be indicated, figures 1, 2. In older patients