Nasal Valves—Importance and Surgical Procedures

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ABSTRACT

One of the most difficult aspects in rhinoplasty is resolving and preventing functional compromise of the nasal valve area reliably. The nasal valves are crucial for the individual breathing competence of the nose. Structural and functional elements contribute to this complex system: the nasolabial angle, the configuration and stability of the alae, the function of the internal nasal valve, the anterior septum symmetrically separating the bilateral airways and giving structural and functional support to the alar cartilage complex and to their junction with the upper lateral cartilages, the scroll area. Subsequently, the open angle between septum and sidewalls is important for sufficient airflow as well as the position and function of the head of the turbinates. The clinical examination of these elements is described. Surgical techniques are more or less well known and demonstrated with patient examples and drawings: anterior septoplasty, reconstruction of tip and dorsum support by septal extension grafts and septal replacement, tip suspension and lateral crural sliding technique, spreader grafts and suture techniques, splay grafts, alar batten grafts, lateral crural extension grafts, and lateral alar suspension. The numerous literature is reviewed.

KEYWORDS: Nasal valves, functional aesthetic rhinoplasty, septoplasty, cartilage grafts, spreader grafts

Proper breathing is one of the most important constituents and features of healthiness and well-being. As rhinosurgeons treating patients who suffer from breathing impairment, we have to turn our attention to the nasal cavities but even more to be aware of the importance of the anterior segment of the nose, the vestibules and nasal valve area.¹

Many elements contribute to its functional stability and guarantee for the individual a feeling of unimpaired breathing. Sometimes we find a surprising discrepancy between our prejudice as investigators and the patients’ depiction.

The amount of airflow felt to be sufficient seems to vary enormously individually. We always have to keep in mind that we deal with a precisely coordinated system of mobile and sufficiently stable yet weak cartilaginous structural elements and elastic fibrous connections and suspensions as well as interwoven muscles in the anterior segment of the nose that seems to be balanced individually and that we are definitely going to compromise by any approach with scalpels and scissors. There are patients who came for aesthetic rhinoplasties and are bothered by consecutively impaired breathing more than pleased by the successful nasal reshaping.

Therefore, we have to analyze carefully the individual finding, the weakest element in the functional chain, the specific risk of the planned procedure, and the most effective technique to combine functional requirements and aesthetic objectives.

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