In-Office Correction of Nasal Valve Collapse in 38 Patients
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Abstract
Retrospective case series of 38 patients undergoing an office-based surgical procedure for the correction of nasal valve collapse between September 2003 and October 2006. The practice setting is a multispecialty clinic. A simple, novel office surgery to correct nasal valve collapse is described in detail, and the indications and overall patient satisfaction are discussed using visual analog scales.

Introduction
Nasal valve narrowing is a commonly overlooked but common cause of the complaint of nasal obstruction. Obstruction at the nasal valve, unlike other more tangible causes such as turbinate hypertrophy or deviated septum, is based on a patient’s perceived sensation of turbulent and diminished airflow. Nasal valve obstruction is difficult to demonstrate objectively yielding inconsistent results using traditional methods such as rhinomanometry. Only by manually opening the valve during the clinical exam and having the patient report relief is the diagnosis of obstruction at the nasal valve supported. Several procedures are described to open the nasal valve and most involve extensive open procedures and cartilage grafting. Even the most aggressive approaches provide inconsistent results and are often associated with significant changes in the shape of the nasal tip. For these reasons many clinicians avoid addressing the nasal valve. We describe a simple yet highly effective method to treat nasal valve obstruction reliably and with minimal risks.

Methods and Materials
Retrospective case series of all patients who underwent correction of nasal valve collapse performed at our institution from September 2003 through October 2006. Charts were reviewed to identify all patients who underwent correction of nasal valve collapse during this time period. This included both office-based and operating room cases. The patients who underwent office-based surgical correction of nasal valve collapse were selected.

Patient satisfaction regarding improvement in breathing and change in appearance were assessed using an anonymous questionnaire. A visual analog scale was used to quantify improvement in breathing before and after the procedure. This scale consisted of a linear representation of degree of breathing impairment (figure). Perceived degree of change in appearance was assessed by direct patient response to the anonymous questionnaire (figure). A numeric value was assigned to each of the response options: no change =1, subtle change =2, and major change = 3.

Results
A total of 190 patients underwent repair of nasal valve collapse at our institution during the study period. Thirty-eight patients had office-based surgical procedures. Of these 38 patients, 32 completed the study by responding to the questionnaire.

Breathing improvement scores ranged from -5 to 10, where a negative score indicates worsening and a positive score indicates improvement. Only one patient reported a decline in breathing ability (the single “-5” score). The mean breathing score of 3.9 indicated an overall improvement in breathing ability following correction (figure).

Conclusions
Conservative resection of the caudal upper lateral cartilage and surrounding mucosa is a highly effective and safe technique for the correction of nasal valve stenosis. This simple technique will enable most clinicians to confidently address and treat nasal valve narrowing.

Bibliography
Kern EB: Surgical approaches to abnormalities of the nasal valve. Rhinology 16:165-189, 1979

Figure 1.

Figure 2.

Figure 3.

All patients included in our study underwent office-based correction of nasal valve collapse utilizing a standardized protocol (figure). Local anesthesia consisted of 1% lidocaine with 1:100,000 epinephrine injected intranasally. Two parallel incisions were made at the caudal extent of the upper lateral cartilage, at the region of vestibular stenosis. A segment of the caudal upper lateral cartilage and mucosa between the incisions was resected. The incision was then closed with 3-4-0 chromic sutures.