



Invited Discussion on: Vertical Alar Folding (VAF) A Useful Technique for Correction of Long and Concave Lateral Crura in Rhinoplasty



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I read with great interest the article “Vertical alar folding (VAF) a useful technique for correction of long and concave lateral crura in rhinoplasty”. This technique is another example of utilization of existing cartilage to preserve or augment the structural integrity of the tip cartilage/tripod complex. The authors show some nice results in their series, and describe the technique well, including intraoperative photos of both endonasal and external approaches using this technique.

As the authors state, prior examples include the cephalic turn-in flap, originally described by both Tellioglu and Murakami and modified by others [1–3]. In this case the authors are shortening the lateral limb of the tripod with a division of the domal cartilage/intermediate crus, but rather than discarding the excess lateral crus, the cartilage is folded underneath the dome and secured to itself prior to reattaching the medial crus.

Dome division techniques can present unique challenges. First, the division of the dome destroys the inherent curvature of the intermediate crus. Over time, as the skin shrink-wraps around the tip, this can result in an unnatural

appearance. In thin skinned patients this is a bigger problem than in thick-skinned. It should be noted that the authors’ examples are all medium to thick-skinned. Thus, this technique may not be amenable to those with thinner skin. Furthermore, in both of the examples that include intraoperative photos, the tip was further augmented with additional tip grafts, covering the new domal construct. It would be interesting to know how many of the patients required additional tip grafting. Shortening of the lateral limb of the tripod will both rotate and deproject the nose. Perhaps the tip grafting was required to re-establish projection?

The second issue with dome division is the inherent weakness of the lateral crus that occurs when the ‘spring’ of the intermediate crus is interrupted. The folding of the cartilage underneath may help ameliorate this issue, but only time will tell if the lateral crus withstands the soft tissue envelope contracture that occurs in rhinoplasty patients over the years. One wonders if the VAF technique can be combined with the cephalic turn-in flap, or some variant thereof, to improve stability of the lateral crus.

My primary workhorse for shortening the lateral crus is the lateral crural steal method, which allows for rotation and increased (rather than decreased) projection [4]. Another method is the lateral crural overlay [5]. In this case, the lateral crus is divided away from the dome. I like to use this method when both deprojection and rotation are required. This is more akin to the method described here, and avoids the issues with dome division mentioned above. Dome sutures may be combined with LCO to create tip definition without dividing the dome.

Finally, the authors are also to be commended for using a patient-reported outcome-measure (PROM) for

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evaluation of their results. The PROM selected, the Rhinoplasty Outcomes Evaluation (ROE) was developed at the turn of the century in a small pilot study, and has been used by other authors [6]. However, over the past 19 years other PROMs have been developed with more rigorous psychometric evaluation, and should be used instead of the ROE. Examples of these are the FACE-Q (Rhinoplasty) and the Standardized Cosmesis and Health Nasal Outcomes Survey [7, 8]. The latter is particularly useful, as it is the only well-validated PROM developed for rhinoplasty that includes domains for nasal obstruction as well as cosmesis, and has been validated in multiple languages, including Farsi, Arabic, French and Spanish [9–12].

Overall this is an interesting paper describing a modification of dome division for deprojecting and rotating the nasal tip. The authors are to be commended for their nice description and use of a patient-reported outcome measure.

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Compliance with Ethical Standards

Conflict of interest No relevant disclosures or conflicts of interest involving the work under consideration for publication, or relevant financial activities outside the submitted work, or any other relationships or activities that readers could perceive to have influenced, or give the appearance of potentially influencing, what is written in the submitted work. No aspect of this manuscript or the data described are previously published.

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

Informed Consent For this type of study informed consent is not required.

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