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EDITOR'S INVITED COMMENTARY

Invited Discussion on: The Anatomical Study of the Nasal Septal Cartilage with its Clinical Implications

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We very much enjoyed reading the manuscript titled "The Anatomical Study of The Nasal Septal Cartilage with Its Clinical Implications" [1] and commend the authors for their work studying the dimensions and availability of nasal septal cartilage in cadavers. In their study, the authors analyzed the septal cartilage of 42 Thai cadavers ranging in age from 20 to 80 years old (27 male, 15 female). Key measurements included length, height, area, and thickness of the cartilaginous septum, as well as the size and area of cartilage that remained after leaving a 10-mm L-strut (termed "septal availability"). All measurements were obtained using a computer software system, ImageJ 1.52.

The data presented in this study add significant value in understanding of the septal anatomy in a specific patient population, and thus is of particularly relevance as it pertains to the surgical rhinoplasty in Thai patients. The authors noted that in their study cohort the mean height, length, and area of nasal septal cartilage to be as follows: 30.96 mm, 26.13 mm, and 636 mm^2, respectively. Interestingly, the authors also studied the dimensions of cartilage available after planning for preservation of an L-strut, and found that the total amount of cartilage available for harvest (i.e., excluding an L-strut) measured 20.96 x 16mm.

To help provide additional clinical implications of their study, the authors stratified their data among specific ages and sex. When the dimensions of the septal cartilage were compared between sexes, no differences in septal length were noted. However, both height and area of the septum were found to be greater in male cadavers versus females. The study also evaluated the dimensions of the nasal septal cartilage by age group and found no significant difference between all age groups.

While the clinical significance of this paper is most relevant for rhinoplasty procedures in Thai patients, the data presented do have important clinical implications beyond this population alone. One of the most interesting aspects of this study is that it focuses on a southeast Asian population with unique cartilage requirements in rhinoplasty that often entail augmentation and/or additional structural support. The authors discuss the need for substantial cartilage grafting for tip support, tip projection, and dorsal augmentation in both aesthetic and reconstructive rhinoplasty for cleft patients or for skin cancer. The nasal septum provides an appropriate donor cartilage, which offers both a straight and substantial amount of cartilage without a secondary donor site. In my experience, a septal cartilage graft that measures 21 x 16 mm (and < 1 mm in thickness) would be inadequate donor cartilage to provide sufficient dorsal augmentation (diced or single construct) along with structural support of the tip (septal extension or columella strut) and ala (rim graft). While the scope of this study was limited to a cadavers, I would have welcomed clinical insight and perspective from the authors on this important topic.

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Other important questions that are raised by this study include cartilage strength, which is an important aspect of rhinoplasty, but not addressed in this particular manuscript. Lastly, I would like to see additional work discuss surgical planning using the results presented—for example, is there a particular pattern/distribution of septal cartilage graft orientation that may maximize total availability and use. At the moment, we are left wondering whether the findings of this study support septal cartilage grafting as a sole donor site for Thai patients (or similar patients needing extensive grafting), or conversely favor the need for additional auricular or rib costal cartilage to meet such demands.

Declarations

Conflict of interest The authors have no conflicts of interest to disclose.

Human and Animal Rights 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.

References

1. Samibut P, Meevassana J, Suwajo P et al (2021) The anatomical study of the nasal septal cartilage with its clinical implications. Aesth Plast Surg. https://doi.org/10.1007/s00266-020-02116-z