

New Incision Method for Effective Execution of Endonasal Septoplasty

Daniel Seungyoul Han, M.D., Ph.D.

Department of Plastic and Reconstructive Surgery,
The Armed Forces Daegu Hospital

The author has no financial interest to declare in relation to the content of this article

➤ **Endonasal septoplasty**

-It is difficult to secure clear view since the nasal septum must be maximally exposed only with short vertical incision within the nasal cavity.

➔ Unnecessary damages to the nasal mucous membrane & Septal perforation

Introduction

- Therefore, Author have devised **a new incision method in endonasal septoplasty**
 - It can easily exfoliate and effectively expose the nasal septum that the existing approach method and I am making report of the comparison of my method with the existing methods.

Materials and Methods



- Firstly, incision was made between a and a` on the median line of the existing modified Killian incision with interval of approximately 5mm using scalpel No. 15(Fig.1).
- The incision was extended to the both ends of a and a' in radial direction that can be reached with clear surgical view(Fig. 1).

Materials and Methods



Fig. 1. Representative incision methods and my method of endonasal septoplasty

Materials and Methods



- Mucoperichondrial flap was exfoliated by using D-knife, cottle elevator and freer periodontal elevator.
- Simple suture with vicryl 5-0 was made at 2 locations, that is, at a and a', after having collected the septum by leaving L-strut(Fig. 1).

Materials and Methods



- Endonasal septoplasty under the conditions that are the same as the existing 3 types of incision methods was performed 10 times
- The average duration of surgery using my method was compared with the other 3 methods in order to determine the usefulness of my method at the time of septoplasty.

Results

➤ My incision method took the shortest time among the methods compared with average time of 10 minutes and 2 seconds in collecting the maximum quantity of septum while leaving the L-strut

Results

Table. 1. Comparison of 4 types of incision methods

	Transfixation	Killian	Modified Killian	Author's incision	p-Value*
Average time taken for the surgery	13 minutes and 31 seconds	11minutes and 48seconds	10minutes and 40seconds	10minutes and 2seconds	0

*Statistical significances tested by Kruskal-wallis test among groups. ($p < 0.01$)

Discussion

➤ Membranous septum becomes an obstacle in exfoliation of mucoperichondrial flap at the time of septoplasty as **it is firmly attached to the frontal section of caudal septum**(approximately 10mm)(Fig. 2).

Discussion

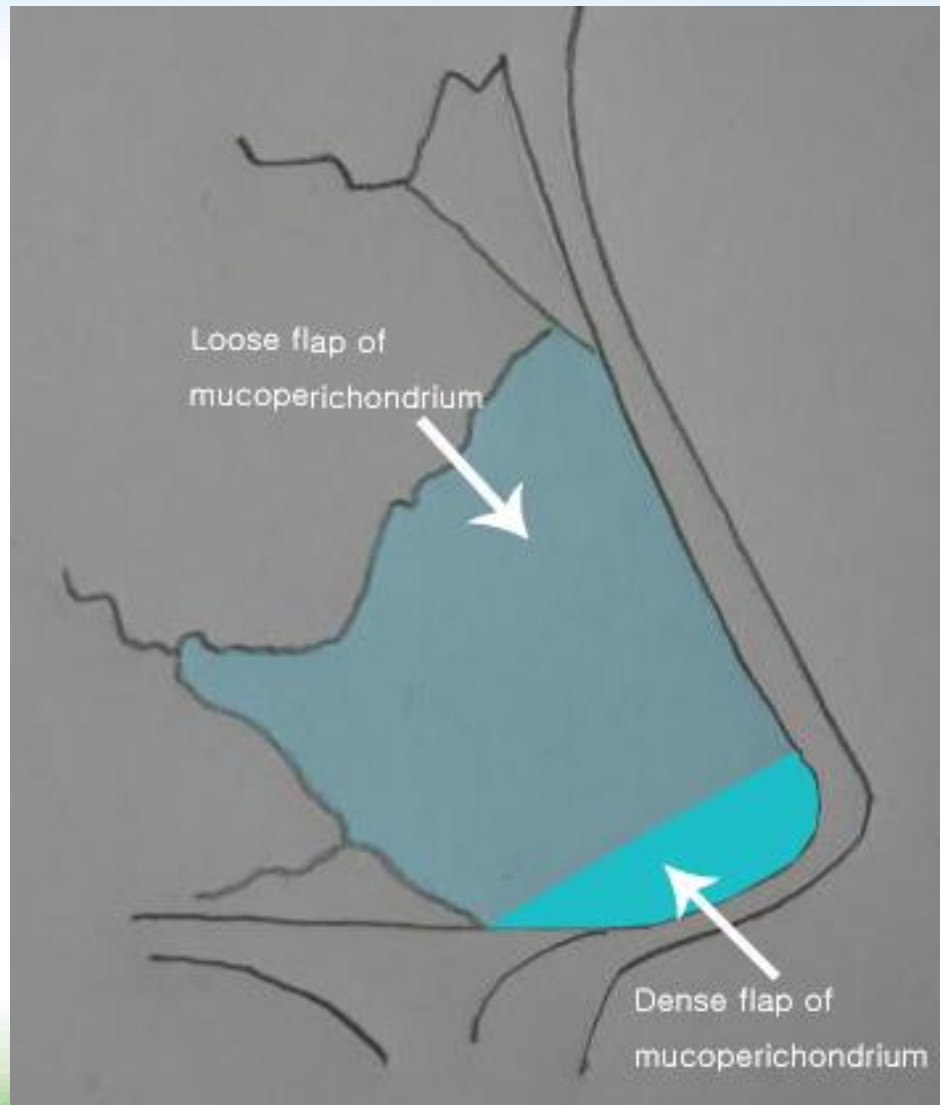


Fig. 2. Mucoperichondrial flap of nasal septum

Discussion

➤ Therefore, it is difficult to exfoliate the frontal portion of caudal septum but the lower and rear aspects can be approached relatively easily at the time of mucoperichondrial flap for septoplasty.

Discussion

➤ My incision method for endonasal septoplasty is compromise between the Killian incision that can easily exfoliate mucoperichondrial flap and the modified Killian incision for which the manipulation of septum and suturing of mucoperichondrial flap following collection of septum is easy.

Discussion



- **By exfoliating the dense tissues in a relatively small area of 5mm**, it was possible to accurately perform septoplasty as it was possible to secure relative wider surgical view by easily exfoliating the loose tissues.
- **Suturing could be easily** completed through simple suture only at a and a' following collection of the septum.

Conclusion

➤ For these reasons, my incision methods recommended as an effective incision method to be implemented in endonasal septoplasty since it requires **the shortest time for surgery in comparison to the existing incision methods.**