New Incision Method for Effective Execution of Endonasal Septoplasty

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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
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 perio steal 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.
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.
Table 1. Comparison of 4 types of incision methods

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

*Statistical significances tested by Kruskall-wallis test among groups. (p<0.01)
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).
Fig. 2. Mucoperichondrial flap of nasal septum
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.
My incision method for endonasal septoplasty is a 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.
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.
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.