

# 사비교정술

부산대학교 의과대학 이비인후과학교실  
노 환 중 · 이 현 순

## Surgical Management of Crooked Nose

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(bony vault) 가 angle 가 dorsal caudal L - shaped strut , 1.5 cm L - shaped strut가 2/3

(graft), inherent memory (deviated state) L - shaped strut가 가 memory L - shaped strut integrity (upper lateral cartilage, ULC) (lower lateral cartilage, LLC) (strengthen)

### 사비교정에 필요한 해부학적 고찰

(nasal vault) (upper) 1/3 (bone) (lower) 2/3 1/3 2/3

1/3 (osteotomy) rasp bony work가 2/3 2/3

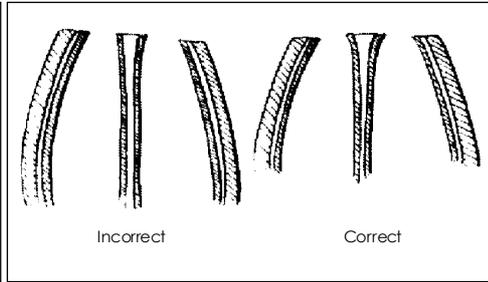
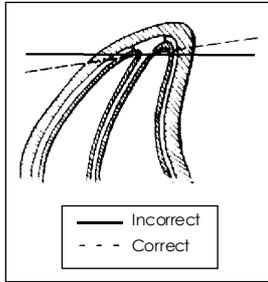
### Bony(upper 1/3) Vault의 교정

(bony nasal vault) (midline) dorsal profile (hump)가

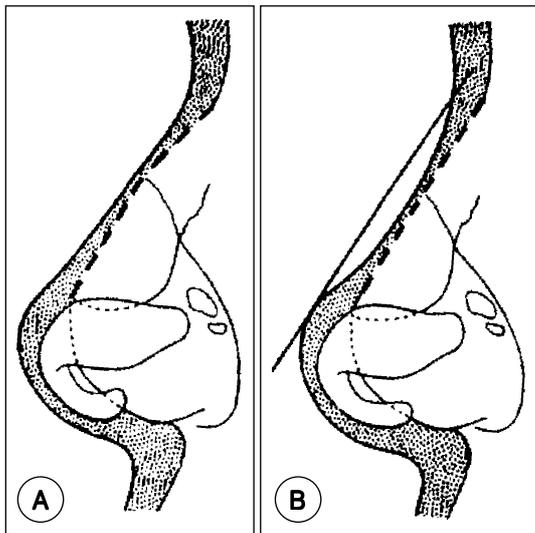
rhinion posterior septal 2/3 (saddle)가 (augmentation) 1가

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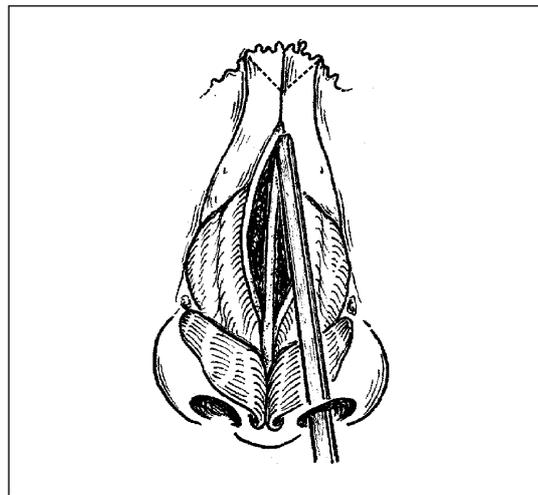
극비 제거술(Hump reduction) Hump



**Fig. 1.** A : When performing dorsal hump removal in a crooked nose, the Rubin osteotome may need to be advanced in a tangential plane to prevent over-resection of the more vertically oriented nasal bone. The broken-line pattern indicates the correct line of resection. B : Position and height of nasal bones after hump removal.



**Fig. 2.** The soft tissue and skin are thinner at rhinion area than around nasal tip and nasion. It is helpful to remove the hump less for straight dorsum(A), and to excise as straightway for a little depressed dorsum(B).



**Fig. 3.** Fading medial osteotomies. Place an osteotome flat against the septum with the edge facing laterally. Control the sharp leading edge of the chisel, as it moves under the skin, with the forefinger of the nondominant hand. Avoid the thick frontal bone.

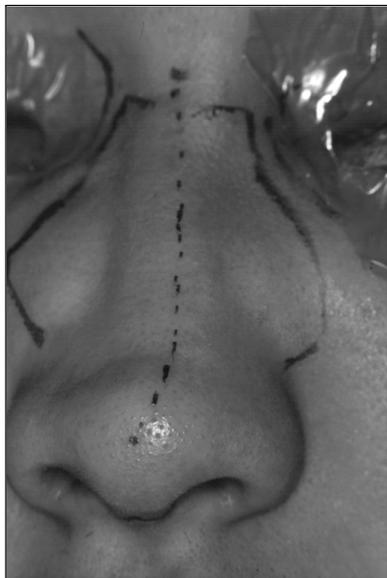
(surgical plane)  
 - 15 blade  
 osteotome  
 가 (mucoperichondrium)  
 osteotome  
 en - bloc  
 (deviation)  
 (Fig. 1).  
 rhinion  
 가  
 가  
 hump

가  
 rhinion  
 가  
 rhinion  
 가  
 hump  
 (Fig. 2).  
**내측절골술(Medical osteotomy)**  
 ULC  
 mm 4 mm  
 straight guarded osteotome  
 two - tap technique  
 (fading medial osteotomy, Fig. 3).

가  
가  
ker deformity 가

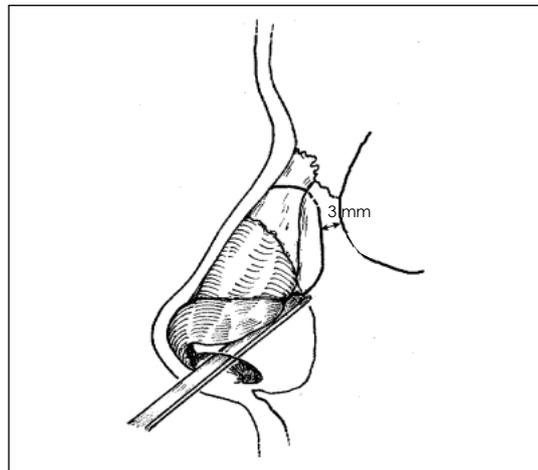
**외측절골술(Lateral osteotomy)**

(Fig. 4). 3  
mm 4 mm ostetome (pyri-  
form aperature) 3~4 mm ,  
inner canthus  
(high-to-low path).  
base triangular bone  
가 (displace)가  
. two - tap technique osteotome cutting  
edge nondominant hand 가  
inner canthus nasion  
high - low - high path가 (Fig. 5).  
bony vault (inward) con-  
trolled backfracture가 thumb pres-  
sure



**Fig. 4.** It is helpful to mark the proposed line of the lateral osteotomy on the skin preoperatively to reduce the risk of osteotomy-induced complications.

subperiosteal tunnel  
가  
10 mm medial  
canthal ligaments(MCL)  
3 mm  
low lateral osteotomy  
MCL path  
inner canthus 3 mm  
가  
가  
3 mm  
bony vault  
(midline)



**Fig. 5.** Lateral osteotomies should be started from a point 3mm to 4mm above the base of the pyriform aperture to a point adjacent to the inner canthus of the eye. Some rhinoplasty surgeons find it helpful to mark the proposed line of the osteotomy on the skin before executing this maneuver.

Walsham forcep  
 stick fracture가  
 bony vault  
 greenstick fracture가  
 greenstick fracture가  
 transcutaneous osteotome  
 (backfracture and infracture)  
 hump  
 open roof deformity가

Double osteotomy  
 convexity concavity가  
 intermediate osteotomy, vertical lateral osteotomy, multiple lateral osteotomy가  
 2 mm transcutaneous osteotome  
 convex side intermediate osteotomy

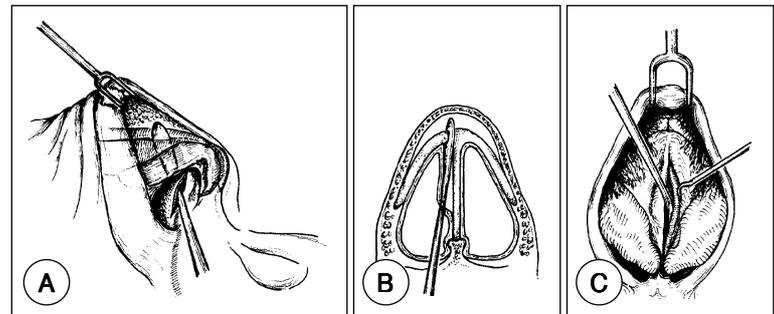
**Cartilagenous(lower 2/3) Vault의 교정**

Vault upper 1/3  
 reduction) ,  
 가 . bony vault  
 2/3  
 lower 2/3  
 (hump  
 bone work  
 lower  
 (ULC)

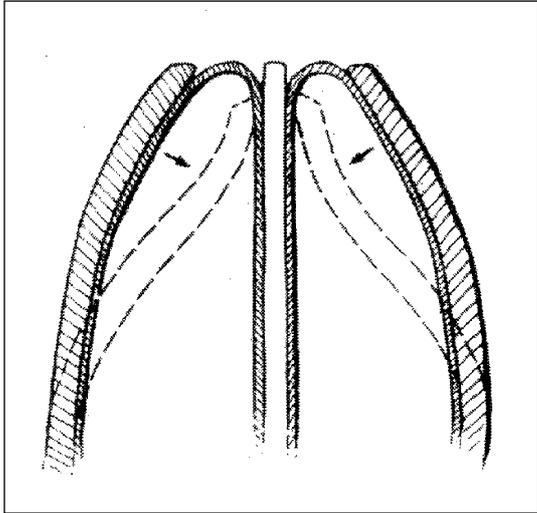
(LLC)  
 vault  
 “ As  
 the septum goes, so goes the nose ”  
 (Beekhuis, 1973).  
 (straighten-  
 ing)  
 2 mm

**Dorsal septum의 처리**

open approach  
 (above) , hemitransfixion incision  
 medial crura  
 (below)  
 (Fig. 6A).  
 ULC  
 subperichondrial flap ULC가  
 , Freer elevator  
 subperichondrial tunnel (intranasal mucosa) violating  
 ULC (Fig. 6B).  
 D - knife elevator  
 ULC  
 (Fig. 6C).  
 ULC inferior - medial collapse가 nasal valve area



**Fig. 6.** Division of the upper lateral cartilages from their attachment to the dorsal septum in the submucoperichondrial plane. Great care should be taken to preserve an intact mucoperichondrium.



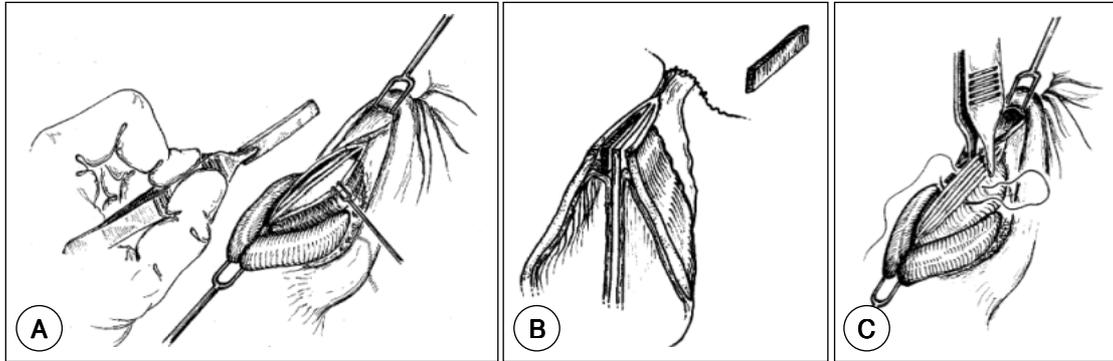
**Fig. 7.** When the upper lateral cartilages are divided from the nasal septum, the upper lateral cartilages can collapse inferomedially, resulting in compromise of nasal valve function.

**Table 1.** Surgical options for correction of cartilaginous vault

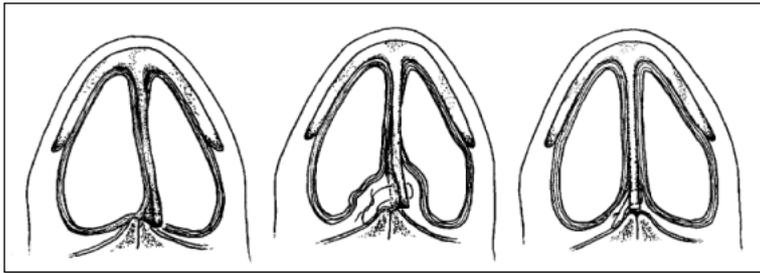
1. Dorsal septal deformity
Minor C- or S-shaped deformity
Cut on concave septum
Spreader graft
Camouflaging augmentation
Significant C- or S-shaped deformity
Full-thickness cut on septum
Shaving convex side, unilateral
Spreader graft, unilateral
Onlay graft on ULC
Bilateral spreader graft
Ethmoid bone stenting sandwich graft
Extracorporeal septoplasty : subtotal septal reconstruction
Camouflaging augmentation
2. Caudal septal deviation
Subluxation
Fracture of anterior nasal spine with crest
Resection of posterior septal angle
Swing back and fixation to contralateral side
Subtotal septal reconstruction

ULC  
nasal valvular collapse  
(Fig. 7). ULC  
concave side 가 가  
inherent memory  
(" The crooked nose has a  
memory ").  
ULC L - shaped septal  
strut dorsal segment  
, ULC anterior septal  
angle  
L - shaped septal  
strut caual segmente dor-  
sal segment가  
(Table 1).  
가 concavity con-  
vexity가 C - shaped deformity  
camouflaging tec-  
hnique (straight appe-

arance) , convex dorsal  
border shaving convex prominence  
concave dorsal border ULC  
spreader graft 5 - 0 PDS  
mattress suture concavity  
nasal valve area (Fig. 8).  
skin redrap  
residual concavity가 concave side  
ULC onlay graft  
C - shaped deformity가  
S - shaped deformity가 concave septum  
5~12 mm( ),  
3~5 mm( ) dorsal  
border 4 - 0 PDS mattress suture  
ethmoid bone stenting graft ,  
1~4 mm( ), 3~6 mm( )  
spreader graft  
dorsal border



**Fig. 8.** A spreader grafts are placed into a pocket between upper lateral cartilage and dorsal septum. A typical graft extends from the osteocartilaginous junction to the anterior septal angle. B ; Bilateral spreader grafts in submucoperichondrial pocket between upper lateral cartilage and septum. C ; Spreader grafts sutured into position. Several horizontal mattress sutures secure the spreader grafts and upper lateral cartilages. A needle of adequate size (such as a PS-2) facilitates engaging all structures (Upper lateral cartilage-to-spreader graft-to-septum-to-spreader graft-to-upper lateral cartilage) in a single pass. Note how this suture passes through the dorsal edge of the upper lateral cartilage.



**Fig. 9.** Deviated caudal septum, "swinging door" maneuver.

가 augmentation , over - rotated nose retracted columella  
 camouflage  
 graft가 ULC antero-caudal portion 가 nasal spine maxillary crest  
 septum anterior septal angle subluxation  
 ULC가 inferomedial collapse (cross-hatch incision) 가  
 camouflage memory , posterior septal  
 angle  
 가 swing back  
 가 nasal spine periosteum  
 (swinging door maneuver,  
 Fig. 9).

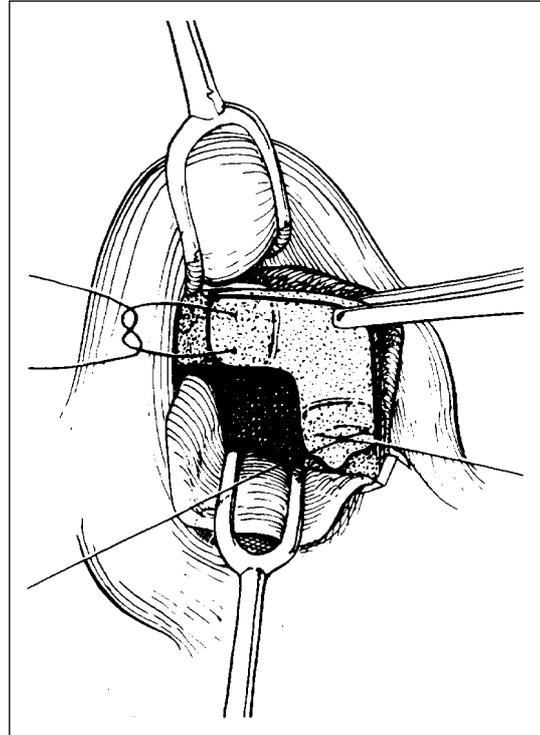
**Caudal septum의 처리**

(caudal septum : posterior septal angle)  
 lower 1/3  
 가 tip projection

**Subtotal septal reconstruction**

Posterior septal angle, anterior septal angle  
 L - shaped septal strut 가

가 posteroinferior portion  
 1~1.5 cm 가 dorsal caudal segment  
 L-shaped piece L-shaped septal strut  
 L-shaped septal strut  
 rhinion nasal spine  
 L-shaped septal strut caudal  
 portion medial crura columellar strut  
 mucoperichondrial flap L-shaped septal strut  
 running mattress suture septal  
 splint (subtotal septal replacement,  
 Fig. 10).  
 가 가  
 L-shaped strut 가  
 , 가



**Fig. 10.** Partial replacement of the septal L-shaped strut (anterior septal angle and caudal segment) with an autologous cartilage graft. The graft may be taken from the posteroinferior region of the nasal septum or from rib. Note how the graft is sutured to cartilage remnants at the osteocartilaginous junction and nasal spine (From Toriumi DM, Ries WR : Innovative surgical management of the crooked nose. Facial Plast Surg Clin North Am 1 : 6378, 1993.).

**Spreader graft**

Spreader graft (camouflage graft)  
 dorsal septum 가 ,  
 spacer middle vault (overnar-  
 row) internal valve collapse  
 middle vault narrow middle vault  
 internal nasal valve collapse LLC  
 lateral crura cephalic trim ULC caudal  
 margin scroll  
 ULC medialization 가  
 narrow-nose syndrome (Sheen, 1984)  
 short nasal bone, long weak ULC, thin skin,  
 narrow projecting nose ULC  
 collapse가  
 spreader graft  
 1~3 mm ( ) 3~6 mm  
 ( ) rhinion anterior septal

angle submucoperichondrial pocket  
 5-0 PDS ULC가 buckling  
 , spreader graft  
 ULC  
 ULC, spreader mattress  
 suture (Fig. 8). spreader  
 graft middle vault width  
 symmetry . middle vault width가 bony  
 vault nasal tip scar  
 contracture dynamics ULC가  
 overwidening

가

중심 단어 :

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