48. *The Cleft Lip Septum*

A basic deformity in the unilateral cleft lip nose is the deviation of the septum which actually leans over the cleft. This is accompanied by anterior dislocation of the septum from the vomerine groove and presentation, along with the displaced nasal spine, into the normal nostril and nasal floor.

Myron Metzenbaum of Cleveland, Ohio, was an amateur sculptor who used his artistic talent in his otolaryngological surgery. In 1929 he wrote a paper, "Replacement of the Lower End of the Dislocated Septal Cartilage Versus Submucous Resection of the Dislocated End of the Septal Cartilage," in which he summarized the advantages of correcting the lower end of the dislocated and deviated septal cartilage in unilateral cleft lip nose. The lower end of the septum will be brought into a straight line, the columella supported, the depressed nasal tip raised and the airways rendered patent and equal.

Myron Metzenbaum

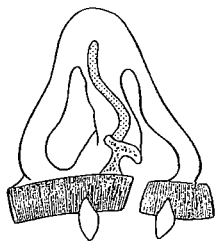
As noted by Holdsworth in 1970:

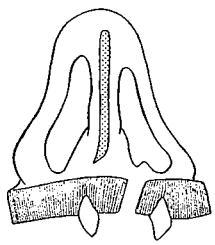
> When seen in adolescence, one constant deformity is deviation of the bridge away from the cleft. Though less than in childhood, it is a stigma, and calls for straightening. Some (Steffensen, 1947; Hogemann, 1965) will operate on the septum in childhood, but most surgeons prefer to wait until much of the facial growth has taken place.

One person, probably more than any other, has pioneered in early septal correction. J. P. Reidy began this work as early as 1948 and in 1968 did a follow-up study of eight cases of excision of the vomer at the time of palate closure around one year of age or less. He found these cases to be free of nasal obstruc-

tion, and the external nasal bridge was central and symmetrical within normal limits, but he noted:

> There is no doubt therefore that partial excision of the vomer at so early an age (1 year) does contribute to maxillary recession. . . . Finally, it would appear that the vomer is essential for general nasal growth and for downward and forward growth of maxillae up to seven years.





Reidy summarized:

> The typical secondary nasal deformity in the unilateral cleft of lip and palate becomes more apparent at 7–8 years. There is partial obstruction due to lateral displacement of the inferior border of the nasal septum by the projecting maxillary ridge formed from the vomer. In the unilateral complete cleft, the forward maxillary part of the vomer is attached to one side only. The abnormal position and the partial maxillary attachment exert abnormal stress on premaxilla and on growth of nasal bony bridge.
>
> Nasal obstruction is frequently present at 7–8 years in cases of repaired unilateral cleft lip and palate and merits surgery (partial submucous resection and straightening of bony bridge) to relieve nasal obstruction.

He diagramed the effect of removal of whole bony spur.

Reidy's clinical findings were confirmed by the research of B. G. Sarnat of California, who did experimental studies of growth of the snout in young rabbits. He found that dislocation of the cartilaginous nasal septum did not grossly affect snout growth, but resection of the cartilaginous nasal septum produced both severe and striking snout growth arrest.

In 1974 Harold McComb of Perth reemphasized the importance of septal cartilage realignment in the unilateral cleft lip nose. Concerned about growth, he postpones the correction until the age of 17 or 18 years. At that time he frees the inferior septum from the vomer, scores it on the concave side, dissects a pocket over the nasal spine area behind the columella and positions the distal end of the septum into the midline. Fixation is obtained by passing a wire through the distal septum down into the upper sulcus and hooking it over a wire eyelet on the opposite upper canine tooth and maintaining it for four weeks.

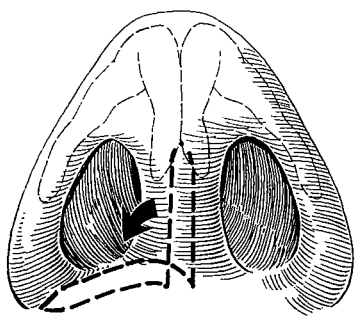
a bit dramatic

Bill Berkeley of Charlotte, North Carolina, who is renowned for his primary nasal correction, during his early experience advocated primary septal correction. More recently he has indi-

cated a willingness to postpone the septal work until the tissues are fully grown and easier to manipulate.

This is also my feeling. The septum of the infant is friable and easily injured but is not so easily dissected or effectively corrected. If all other nasal components are positioned as near normal as possible primarily, the septum can be straightened at the time of corrective rhinoplasty along with nasal bone osteotomies (at about 16 years of age). If there was no previous septal surgery, there will be minimal scarring, which now facilitates the important final correction. A submucous resection, leaving the usual L-shaped scaffold for support, will obtain enough cartilage to make the several 0.5 × 3 cm. struts needed for tip support. The remaining front of the L can be freed from its dislocated position, centralized and fixed with a nylon suture. The displaced nasal spine is best resected. Such a procedure was done for this 30-year-old woman: a submucous resection, correction of the anterior limb of the L and insertion of a septal cartilage strut in the columella from spine to tip. Other illustrations and examples will appear in Chapter 53.

ANTERIOR SEPTAL FLAP



There is a clever septal trick, suggested by Ross Musgrave of the University of Pittsburgh and presented in Melbourne in 1971, that might be of use in specific cases when the nose is too long and the nasal floor on the cleft side is slightly depressed. He shortens the nose by shearing a narrow flap of the distal septum, cutting it from above down with its base maintained at the nasal spine area. This cartilage flap, shorn of mucosa, is turned 90 degrees and threaded under the nasal floor of the depressed cleft side to give additional support.