

# *VI. Complete Clefts*

## 31. *The Struggle for Acceptance in Complete Clefts*

### SOME EXPRESS RESERVATIONS

ALTHOUGH Clifford and Pool accepted the rotation-advancement in incomplete clefts, they were the first to express some reservations about its use in complete clefts. These judgments were, however, based on early (now obsolete) diagrams. This was their logic:

In the Millard repair we see that the vertical height is gained by the use of a modified "Z" with lateral mobilization under the nares. The greater the vertical height needed, then, the more will be the lateral mobilization needed with added tension under the nares. Tension at this point is a great disadvantage in the wide cleft where this falls right over the separated alveolar ridge. In the complete unilateral cleft, in order to gain sufficient height with the Millard repair, the incision must be carried up through the philtrum, across the base of the columella on the uncleft side. To match the length of this incision some vermilion of full thickness of the cleft side must be sacrificed. This puts maximum tension in the Millard repair at two points; the first just under the base of the nares and the second at the white line of the vermilion.

They went on to say:

An advantage of the flap procedures which are done at the lower half of the cleft is that they put the line of maximum tension below the alveolar ridge at the point where the lip normally begins to pout.

I thought this interpretation incorrect and soon said so.

My response was published in 1960 under the title "Complete Unilateral Clefts of the Lip":

Yet as some express anxiety when facing a severe complete cleft [with the rotation-advancement]. . . . Any closure of a wide cleft is more demanding and will call for a point of *tension*. The point of *contention* is where this point of relative tension is best tolerated—along the lower portion of the lip where any tightness is reflected in the loss of natural looseness of the free border, more in LeMesurier and less in Tennison, or high in the lip just under the nasal base where tension is almost mandatory anyway to correct the gaping nostril floor and grotesque flare of the alar base? In the latter any relative tension is splinted by the maxillary processes. This also produces a natural eversion of the free border of the lip. It might be said that if one can get a closure at the high point the possible distortion will be minimized. Thus, the flap from the lateral lip element has been designed to come from the upper portion and its medial advancement across the cleft will bring the delinquent alar base along with it into line. . . . A wide cleft should not, in most cases, require any more radical rotation than an incomplete cleft. The increased demand is the distance required for the lateral flap to advance across the cleft. Yet, as the width of the nostril floor and the flare of the alar base is [usually] greater in wide clefts, it follows that the distance the lateral flap must advance medially is also increased. Thus, it is suggested the rotation-advancement principle is actually more effective in wide clefts and certainly its margin of advantage is as definite in complete clefts as in incomplete ones.

2 birds  
with one  
pull

A helpful hint in timing was also mentioned:

The time factor is an ally in the wide clefts. Although the rotation-advancement method has been used very early with success, it has been found far easier in a fat and pink three month old infant. The tissues are more generous for the approximation and the maxillary components have had at least three vital months to grow without lip restraint. Because of the former and in spite of the latter, the cleft is relatively less "breath-taking."

Ross Musgrave in 1963 joined with Clifford and Pool in selective use of the rotation-advancement method.

When this procedure is used for the severe complete cleft lip, some difficulty has at times been encountered with the lateral flap development. Extension of the incision far down the lateral side of the lip may be required, producing tension just above the mucocutaneous ridge. . . . In the wide

Such a  
long lateral  
trip is not  
necessary

unilateral clefts repaired in this manner, the involved nostril may appear small and rolled in for the flap developed below the lateral nostril insertion must be brought far medially beneath the columella. Furthermore, where the cleft is severe and the upper point of the cupid's bow lies close to the columella on the cleft side, the "uncurling" and dropping down of the medial lip segment has at times presented a problem.

Along the same line, and as late as 1969, Russian Kozin stated:

It is not possible to use the Millard method in those cases where there is a large defect of the lateral part of the lip in vertical as well as horizontal direction. In such cases, it is most appropriate to use a modification plasty according to Kawrakirov in which, in relation to the degree of lack of tissue, two opposite triangular wedges with angles of 60°, or 45° and of 70° respectively are cut from the base of the skin part of the nasal septum and from the involved nostril.

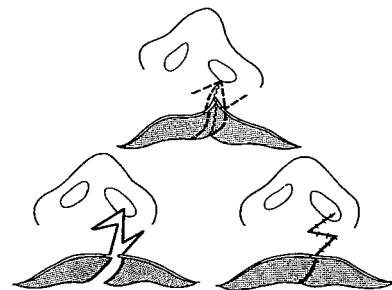
Actually, the medial incision varies the angle of rotation, and the lateral flap is based above, as advocated by Wynn. It is, in fact, a Z-plasty positioned higher in the lip and is shown here as a secondary procedure. It promises no better solution to wide clefts with deficient lateral lip elements and, in principle, does not offer many of the assets of the rotation-advancement.

In 1965 Jorge Psillakis of Brazil reported excellent results with the rotation-advancement method in incomplete clefts but not as good results in complete clefts. Yet, the results he showed which revealed retraction were only from one to three months after surgery!

## A CLEARING POOL

The beginning of a breakthrough came in 1966 when Robert Pool of Michigan, the tall, ambling, artistic and astute surgeon of Dutch descent, with more experience in the method and a six-year follow-up, approved its use in wide clefts. He made some interesting observations:

In the series of cases reviewed, it was discovered that the rotation-advancement repair could be used effectively in all types of lips except when the lateral lip is short in both horizontal dimension and in its vertical height. The lateral lip is the key which locks the medial element in place. A clue



Too  
Soon



Robert Pool

to this type of lip lies in the amount of tissue available medial to the alar base, and in the measured vertical height of the existing cupid's bow. It is probable that this type of lip would be difficult with most repairs and certainly will not result in a full lip under any circumstances.

Pool made several other points:

Technically the rotation-advancement repair is simpler to execute than most triangular flap repairs. For this reason most novitiates in plastic surgery will obtain better results with fewer secondary problems. . . . It has been found that if all layers are accurately approximated and a pleasing lip is attained at the time of primary surgery, the lip height and contour will be precisely similar after a five year period. This repair, although basically uncomplicated, does not allow the surgeon to do a casual repair. . . . The eye can detect asymmetry of less than 1 mm. If a lip repair is performed in infancy and normal growth and development occur the acceptable range of error at the time of surgery is less than 0.5 mm.

#### THE UNSUITABLE LABEL

Yet the label "not suitable for wide clefts" continued to be stamped on the rotation-advancement method by some surgeons. As Mark Twain once said,

Often the less there is to justify a traditional custom, the harder it is to get rid of it.

DeHaan commented in 1968:

We have had somewhat more success with the triangular flap method than with Millard's superiorly placed flap which is sometimes difficult to advance adequately.

Chase also, in 1963, reported that, although he generally employs the Millard infranasal Z-plasty since it places the primary scar along the normal philtrum line,

in order to achieve precise measurements in lips, when more vertical length is needed than can be provided by the Millard technique, the author favors the triangular flap supravermillion Z plasty described by Tennison.

In a discussion with Bob Chase during the half-time intermission of the 1971 Super Bowl game in Miami, and over the

blare of the bands, he indicated that he was using the rotation-advancement method more in wider clefts.

## PERKO

Even as late as 1971 at the Stomatology Institute of the University of Zurich where my old friend from "Gillies days" Professor Hugo Obwegeser is doing such brilliant work on facial bone shifting in clefts, there were still reservations with the rotation-advancement method. Yugoslavian Milivoj Perko does most of the primary clefts for this unit. With orthodontist M. Hotz he stated in *Minerva Stomatologica* that, when the cleft is incomplete or when the lip muscles are well developed and the cranium is of good size, he prefers the rotation-advancement method. Yet when the cleft is wide, the muscles are underdeveloped and the cranium is small, he prefers the Tennison procedure. Perko, an expert on the facial skeleton, evidently has found some correlation, but my Italian is so sketchy that the only translation I have been able to come up with is: If the head is normal size, use the rotation-advancement; if microcephalic, use Tennison. I would have to go along with that.

For complete clefts, Perko and Hotz reported difficulty using the rotation-advancement, finding that tension along the mucocutaneous border caused loss of the pout. Perko evidently is not satisfied with Tennison either, as he modifies the method with a Trauner flap.

He responded to my challenge in 1972 and confirmed his stand:

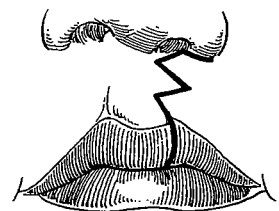
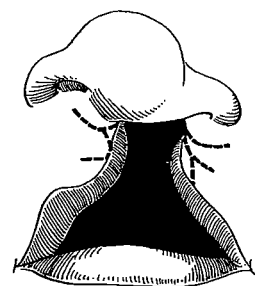
In most of the cases where I use your standard rotation-advancement method, this method is performed without any modification. I personally use very often your method, especially in partial and narrow cleft lips and find it an ingenious one. Only in a few cases an additional Z-plasty on the vermilion border was necessary.

In very wide clefts I still use the Tennison-Randall method, combined with a Z-plasty on the base of the nostril, similar to the description of Trauner and Skoog.

It was, therefore, a special pleasure to visit with the gentle,



Milivoj Perko



sincere "Voyo" Perko over a breakfast Danish during the 1973 Cleft Palate Congress in Copenhagen and encouraging to hear his quiet response to my questioning.

Yes, I now use the rotation-advancement method in almost all primary cases because of the correction of the nose.

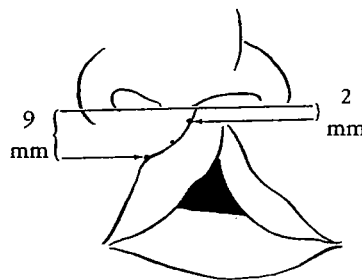
When asked if he still had difficulty with the rotation in wide clefts, he shook his head and said, with a suggestion of a smile,

No, the downward cut at the end of the incision is helpful and produces a better scar than the triangular flap, which is not always so nice.

### BREAKING THE BARRIER

Several surgeons, including such renowned ones as Randall and Cramer, have cited and taught that a difference of 3 to 4 mm. between the vertical height of the two bow peaks on the non-cleft element is the automatic *cutoff* limit for using the rotation-advancement. They have always said simply that they have difficulty rotating the cupid's bow into symmetry with more than that distance to go. Of course, the back-cut should wipe out this cutoff.

To drive the point home, let us turn, not even to a complete, but instead to an incomplete cleft in little Sandra of Jamaica. Her medial lip element measured 9 mm. from columella base to bow peak on the non-cleft side and only 2 mm. on the cleft side.



9 - 2 = 7! but the bow came down into perfect symmetry with a minor back-cut and very little difficulty.

At the 1973 Foundation Cleft Lip and Palate Symposium, expertly produced by Nicholas Georgiade at Duke University Medical Center, a few recent adjuncts designed to facilitate rotation and advancement in certain cases were presented. The following day in the hall, I challenged a young innovative surgeon who I knew also suffered the 3 mm. hang-up. He admitted with a twinkle that he still preferred the inferior triangular flap with more than 3 mm. bow discrepancy, and when I asked,

Even with the back-cut?

he responded with a switch:

Oh, I have no trouble with getting enough rotation. It's the deficiency on the cleft side.

I wondered why the rigid 3 mm. limit was being used for the cleft side and countered,

Did the adjuncts just presented in measuring and extending the cleft side and the muscle flaps from the medial side help to alleviate this hang-up?

He mumbled defensively and almost as an aside,

Oh, by a little cheating, you mean?

Then I went for him.

Let's try to get this into perspective. You are imposing inflexibility by presupposing that a published description dogmatically sets an *iron rule* and any modification is unfair infraction of that rule. No! That's fuzzy thinking. Any method should be accepted merely as a proposed principle which for each case can and should be varied, not by cheating but by creating!

#### CATCHING A WILY ONE

There were just too many good men along with the others joining what I affectionately refer to as the *loyal opposition*. A



statement by Musgrave in 1963 and repeated in 1964 had caused me many a sleepless night. He wrote:

In Millard's hands and the hands of some other surgeons, this procedure has been satisfactorily used for all forms of unilateral cleft lip.

What was the hang-up? Eventually it was realized that the back-cut in rotation and the circumalar extension in advancement were the previously undescribed and inadequately illustrated essentials that were making the difference. These details were stressed in Rome in "Rotation-Advancement in Wide Unilateral Lip Clefts" and elaborated upon a year later in "Extensions of the Rotation-Advancement Principle for Wide Unilateral Cleft Lips." The "extensions" caused Musgrave to state in Rome that these modifications presented a *new* operation which deserved *reconsideration in wide clefts*.

Yet, over the past few years, the talented Ross Musgrave has continued to have a "thing" about different degrees of cleft being more suitable for different procedures. I think this is nonsense, and Ross and I have gone round and round on it, but until recently he has held tight to the theory. In 1971 there seemed to be a little weakening for he admitted about the rotation-advancement method:

A minimal amount of tissue is discarded. The ultimate suture line direction is superior to any of the zigzag scars. . . . It is a fluid method that can be adjusted as one proceeds. *It is by far the method of choice for the majority of cleft lips.*

*The italics  
are mine*

He acknowledged the refinements and extensions proposed to facilitate rotation and advancement and labeled it the Millard II,

*residents  
like it*

in which a much better nostril is created both at the apex and at the base of the columella. The Millard II, which is much trickier for the inexperienced surgeon, continues to have the disadvantage of extending the lateral incision too far down the mucocutaneous ridge toward the lateral commissure.

*I do not  
find this  
a problem*

This is not necessarily the case if the operation is done correctly. Measurement from the height of the cupid's bow to the

end of the lateral commissure on each side should be within 1 to 2 mm. In fact, the width of the cleft offers no real problem in the rotation-advancement approach.

### A RUSE ON ROSS

Only after several sleepless nights did I finally figure out how to persuade Musgrave. The plan was to do an adhesion procedure and turn a very wide cleft into an incomplete one and wait six months. Then, without telling Ross, I would get the case to him and, as it would be an incomplete cleft, he would use the rotation-advancement voluntarily according to his gradation theory. The result would make him so happy that one evening over a beer he could be told the truth and he would be hooked forever . . .

November 30, 1972, before this subterfuge could be perpetrated, Ross Musgrave wrote me a congratulatory note on the Dolphins football team's record up to that time of 12 and 0. As an afterthought, he added:

Incidentally, I think you should know that for the very wide cleft lips I am now using the Millard II almost exclusively, and in the past year have done only one triangular flap and no rectangular flap operations for the wide cleft. In my "canned lecture" carousel, I now am using the Pigott illustrations you so kindly sent me. I am combining this with the little stitch from the opposite nostril to the tip of the advancement flap which you described in Melbourne.

*"Try it,  
you'll  
like it."*

*3 cheers!*