8. Full-Thickness Flaps for Vertical Lengthening

A means of shifting tissues from an area of plenty to an area of paucity is achieved by the concept of cutting full-thickness flaps of skin, muscle and mucosa of the lip. This more advanced principle was used almost as early as the angled paring of cleft edges to lengthen the vertical height. Paris was the center of this new fashion in lip surgery which came into vogue almost half a century before the Eiffel Tower.

MALGAIGNE

Joseph François Malgaigne at the University of Paris, frustrated by the contracture of the popular paring and straight-line closure of his day, wrote in 1843:

I came to the conclusion that with all the surgical skill available, we could only transform the severe case of cleft lip to its mildest form. It is virtually impossible to remove the notch of the vermilion.

Obsessed with the determination to obliterate the inevitable postoperative whistling deformity, Malgaigne designed a two-flap operation. He pared the upper half of the cleft edges. Then he made horizontal full-thickness relaxing incisions which, when opened like two "V's" and closed one to the other in a straight line, exaggerated the lengthening of the edges. In fact, the

Joseph Malgaigne
The despised notch was transformed into an almost equally obnoxious asymmetrical tubercle.

**Miraульт**

Following Malgaigne's report of the operation, G. Miraульт, also of Paris, immediately saw its value and a flaw. Two months later he wrote Malgaigne suggesting the use of only one horizontal incision and the mere paring of the other edge to avoid the tubercle. This procedure, in essence, produced a triangular flap to overlap the opposite side. There seems to be much controversy as to which side produced his flap. In his thesis for Doctorat en Médecine in 1930, Paul Plessier of Paris outlined the two methods of Miraульт. The first used a flap from the cleft side; the second took a smaller flap from the non-cleft side.

By 1846 Miraульт's triangular flap method had gained enough importance to be reproduced in a surgical textbook by Claude Bernard, and the illustration indicates that the triangular flap was taken from the cleft side to bolster the medial element.
It is interesting to study the various renditions of the Mirault method as described by Thompson in 1912 and Binnie in 1916.

This method proved to be the stimulus for many modifications over a span of 100 years.

**AN IRISH MODIFICATION**

The best of the early modifiers was M. H. Collis of Dublin, who improved Mirault's procedure by preserving tissue for the nostril floor, establishing a principle to be utilized later by many other surgeons. In 1868, in the spirit of a true plastic surgeon, he wrote of his "esthetic method."

I never throw away a particle of the parings. My incisions are made so as to make every fragment of them useful.

Here are two photographs kindly supplied by the Royal College of Surgeons, Dublin. They represent different cases, but both have Collis' note inscribed beneath them. One shows a more severe cleft and the other the result of Collis' procedure on probably a less severe cleft with minor discrepancies still present in the lip and nose.
OWEN’S FOLLY

During this period of pioneering there were many who in attempting to modify Mirault’s method actually mutilated it. For example, an Englishman, Edmund Blockett Owen, 1847–1915, was a vigorous surgeon at Great Ormond Street Children’s Hospital, a fly fisherman and captain of the St. Mary’s Hospital football team.

It is possible he poured too much athletic enthusiasm into his cleft lip operation when, in 1890, he modified Mirault. By reversing and exaggerating the triangular flap until it extended across the entire border of the lip, he actually displaced the mouth into a lopsided position.

A report by one who knew him well might explain this procedure:

The transparent honesty of Edmund Owen shown not least in an impulsiveness which led him to hasty conclusions, soon to be put aside so that he would vote tomorrow against that which he had advocated today.

It is hoped that such was the fate of his lip procedure before too many unsuspecting young surgeons had been tempted to try this atrocity.