

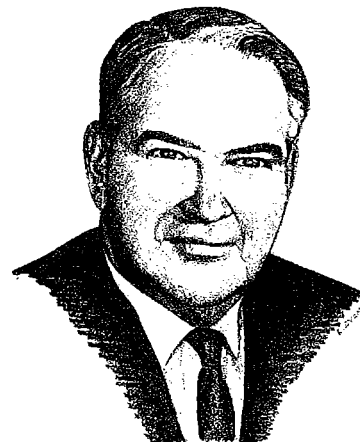
44. Free Composite Grafts to the Columella

AN incision at the base of the columella followed by a membranous septal incision can release the nasal tip along the septum. The resulting gap in the lower portion of the columella has been filled with various composite auricular grafts.

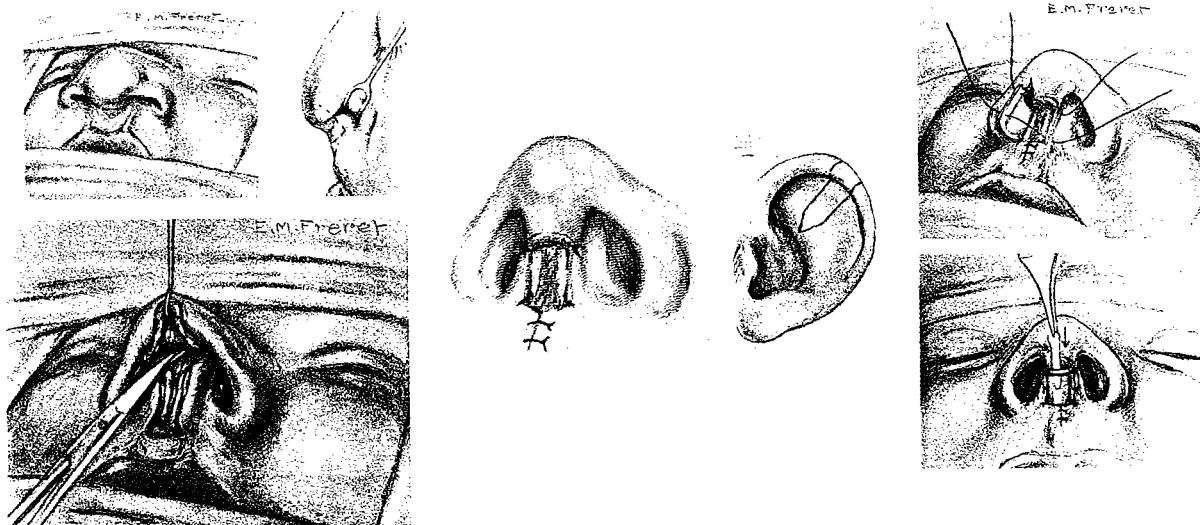
König in 1914, Davis in 1919, Limberg in 1923 and Joseph in 1931 all described composite auricular grafts to the nose, but König must be knighted with priority. Gillies advocated the chondrocutaneous ear graft for nasal reconstruction in 1943. Yet it was Barrett Brown with Cannon in 1946, and the entire St. Louis contingent thereafter, who popularized this method.

Robert Meade of New Orleans has given the most elaborate description of the use of the composite auricular skin and cartilage graft for the columella. Possibly overreacting to the super droop of all that Spanish moss in the Cajun bayou, Meade slipped extra cartilage spines behind his grafts.

As illustrated by the fabulous drawings of E. M. Freret in *Plastic and Reconstructive Surgery*, February 1959, the columella was released and a composite wedge graft from the ear was cut to fill the columella defect. Several extra cartilage struts were inserted behind to add contour and support. My only concern would be the possible interruption of the incoming vascularity by these struts, to the utter dismay of the struggling graft.



Robert Meade



Meade philosophized:

Smith, Slaughter and Brodie and Schultz among many others insist that the prolabium is a natural part of the upper lip and should be included in the lip in any plan of repair of bilateral clefts. . . . With use of a composite, auricular graft for construction of the columella, the prolabium can be left in its normal position. . . . Sufficient time has not elapsed since the inauguration of this procedure to estimate adequately growth factors as related to the nose and the grafts. . . . Peer reports observation on the growth of young, human cartilage autografts of ears, septal and rib cartilage. He noted that these grafts retain their characteristic structure, and that there was evidence of growth in the ear and septal cartilages.

FREE SKIN AND FAT GRAFT



Milton Dupertuis

Zino, in 1943, seems to have been the first to advocate the use of the composite graft of skin and fat from the lobe of the ear to lengthen a short columella.

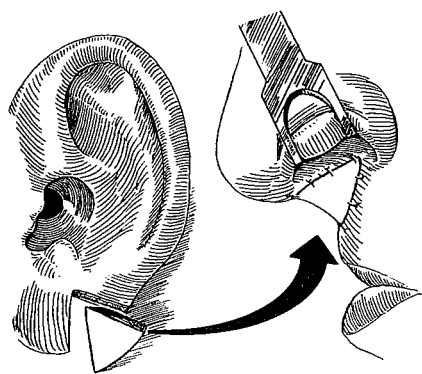
Meticulous Samuel Milton Dupertuis, of the University of Pittsburgh, who had early training in Paris with Professor René Leriche and later with J. P. Webster at Presbyterian Hospital in New York, in 1946 reported his experience with free composite grafts of the ear lobe to the columella. As a reflection of the frustration experienced in bilateral cleft surgery, Dupertuis once wrote in a letter to Webster:

One sometimes suffers from being a perfectionist, but in most instances it seems manifestly worthwhile.

In Webster's memoriam to Dupertuis, the story of his ear lobe grafts is complete:

His fairness and integrity are illustrated by his readiness to give credit to others when it was due. For instance, in publishing a series of cases showing excellent results from free grafting of skin and fat as composite grafts from the ear lobe, a method which he independently devised, he discovered that the procedure had previously been described in a little known report and gave that author credit for priority. He later had the courage and broad-mindedness to show cases in which this method had not been so successful as a warning to others of possible limitations in its use.

Influenced by Dupertuis, Musgrave and later Lehman described interesting results with this approach.



Then, in 1974, Musgrave and Garrett published a 14-year follow-up of a composite ear lobe graft which demonstrated a definite lengthening of the columella but a stuck-on unnaturalness without the graceful sweep of the columella into the nasal tip or the lip.

A COMPARISON

In 1949 Donald Pellicciari of Columbus, Ohio, compared the two types of composite auricular grafts. At this time he seemed to favor the lipocutaneous lobe graft over the chondrocutaneous helix graft:

The lobe is especially handy as a donor area since it can be repaired immediately after taking the graft, needs little aftercare and leaves no noticeable scar. It is also a perfect match for color and texture.

The helix graft, however, has several disadvantages:

1. Must be no wider than 1 cm.
2. Requires two stages to repair the donor site.
3. May take on a darker pigmentation.
4. Care must be taken not to separate skin from cartilage.

Yet he acknowledged that the presence of cartilage led to rigidity, producing a columella without creases. This to me is the crux of the choice, for a lobe graft tends to be pudgy like a marshmallow and a chondrocutaneous graft is like the columella it is constructing.

It seems that using the ear for the columella in bilateral clefts, although easier for a compromise result, can be considered somewhat of a desperation move. Nevertheless, fine surgeons find it tempting. In 1973 Broadbent, discarding much prolabium while using rotation-advancement incisions in the Manchester primary bilateral cleft closure, often ended up with a flat nose and short columella. When challenged what he does about this shortage, he admitted using free grafts from the ear. Knowing Broadbent, one could wager he gets quite good results. Then, in 1974 with Woolf, he wrote again about ear grafts:

A composite free graft from the ear may be used to elevate the tip and also avoids operating on the lip.

In the cases presented in 1977, their ear grafts had an unnaturalness. In principle there must be a better way.

Recently, I have had occasion to treat secondarily a bilateral lip cleft which had had transection of the columella at its base and the insertion of an unsuccessful composite auricular graft. This failure compromised my execution of a forked flap and forced use of a less satisfactory method. The case appears in Chapter 39.



Max Pegram

ALAR BASE GRAFT

In 1954 Max Pegram of Wilshire Boulevard, Los Angeles, California, described use of composite alar base wedge excisions for staged free grafting of a congenitally short columella. At that time he stated:

The use of the ala composite graft for lengthening of the short columella of the bilateral cleft lip is under study at the present time.

Such action has commendable economy if indeed the alar bases can afford it. Few bilateral cleft lip cases could spare enough to lengthen the columella sufficiently to lift and maintain this elevation. As no further publications appeared from Pegram, I wrote him for an up-to-date report.

This is his answer on June 11, 1974:

I have been very derelict in not publishing a follow-up article on ala grafts to elevate the columella and unfortunately all of my photographs were lost.

It is the only procedure I have ever used to elevate a columella and have used the procedure approximately 25-30 times. The grafts measure 5 mm. along the free edge and they have all survived. On several occasions about six months after the first ala graft, I have taken a second graft from the opposite ala and grafted it in the columella for further elevation. They too have all survived. Trophic changes have been minimal, if at all.

I like the procedure because of its simplicity and the columella looks quite normal.