

Special Editorial

Excellence in Cleft Lip and Palate Treatment

Although it is important that specific new treatment modalities be reported in the literature, it must be remembered that true excellence in cleft lip and palate treatment is dependent on a dedicated multidisciplinary approach in which the surgeon's performance over time is primary in determining the success or failure of the overall treatment. Experience and objective analysis are paramount in determining which procedures, sequencing, or timing protocol gives improved results. The effect of a given new treatment on final patient outcomes cannot be adequately evaluated in the short term by a surgeon or his or her team. Improved care will only be achieved when experienced surgeons and teams evaluate these modifications in the context of a dedicated multidisciplinary approach over extended periods of time. Unfortunately, there is a dearth of such long-term evaluation studies in the professional literature, creating a serious gap in our ability to assess the ultimate value of most new techniques or treatment modalities. The article, "Approaches to Cleft Lip and Palate Repair" by De La Pedraja et al,¹ presents recent and historical notes about treatment and diagnosis; however, the effectiveness of specific treatment protocols or advantages or disadvantages of specific techniques are not addressed.

Over the last 30 years, the Dallas Cleft Lip & Palate Treatment Center has evaluated a treatment protocol which, in our experience, has yielded consistently good and proven results. Treatment goals are to achieve early correction of form and function, incorporating the major advances in cleft care (Table 1). Many surgeons and teams worldwide have contributed to our knowledge about this approach. Our own personal interest has been in achieving early, more normal anatomic relationships of displaced and missing soft and hard tissue structure of the lip, nose, and underlying skeletal base. To achieve this, we have adapted the following protocols for timing, sequencing of procedures, and techniques. Many of these are modifications of established procedures, while others are our own. The surgical protocol used at the Dallas Cleft Lip & Palate Treatment Center includes the following:

Address reprint requests to Kenneth E. Salyer, MD, International Craniofacial Institute, 7777 Forest Lane, Suite C-717, Dallas, TX 75230. E-mail: kes@craniofacial.net

- 3 months: primary unilateral cleft lip and nose;
- 6–9 months: two-flap one-stage palatoplasty;
- 5 years: secondary minor lip nose (35% of cases);
- 7–9 years: cancellous iliac bone graft to alveolar cleft (100% of cases);
- full growth: orthognathic surgery (20% of cases);
- 12–18 years: rhinoplasty or other soft tissue surgery (most cases).

The early correction of cleft nasal deformity has been one of our primary contributions.^{2,3,4} Early correction of the cleft nasal deformity has become a standard approach by most surgeons working in major centers dealing with cleft care. The technique which I use is briefly outlined in this text (Figures 1, 2, 3, 4, 5, 6a–6c, 7a–7b, 8). Primary correction of the lip and nose is the single most important procedure in determining excellence in the outcome of facial appearance, but all surgical procedures are necessary to achieve long-term good results.

Bone grafting at the time of eruption of teeth, along or adjacent to the cleft, is another major advancement as developed by the Oslo group.⁵ We have adapted their approach over the past 20 years with consistently excellent results.

Orthognathic surgery, when indicated in conjunction with perisurgical orthodontic treatment, yields a stable, pleasing, functional, and esthetic result which eliminates the cleft dysmorphogenesis. This can result in a normal, attractive face for the patient. Our goal for all patients when observed at conversational distance, is normal appearance, speech, and occlusion of the teeth without the stigma of perceived deformity.

Excellence of cleft care has been demonstrated using this protocol in Dallas.^{6,7} A number of other centers and surgeons delivering dedicated cleft care

Table 1. Treatment Goals

*Early correction of form and function
*Primary correction of tension-free, mobile balanced lip
*Primary correction of cleft nasal deformity
*Early primary 1-stage palatoplasty before 1 year of age
*Complete all primary surgery by 1 year of age
*Early minor secondary lip and nose surgery before school
*Secondary cases (not our own) more severe the deformity—more aggressive the surgical correction
*Reconstructions of skeletal alveolar deficiency at 7–8 years
*Balance and harmony of the skeleton are the most important aspects of cleft rehabilitation

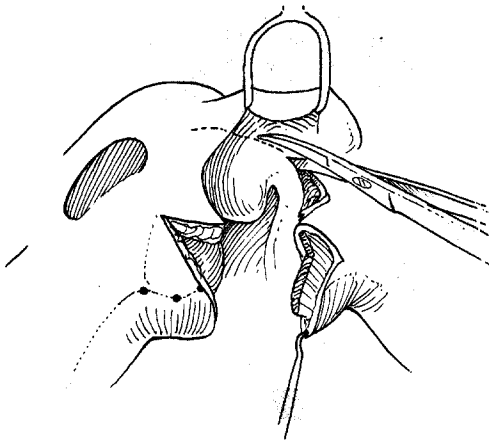


Fig 1 The intranasal incision from the base of the alar is extended above the inferior turbinate. The extent of the incision is determined by the degree of nasal deformity.

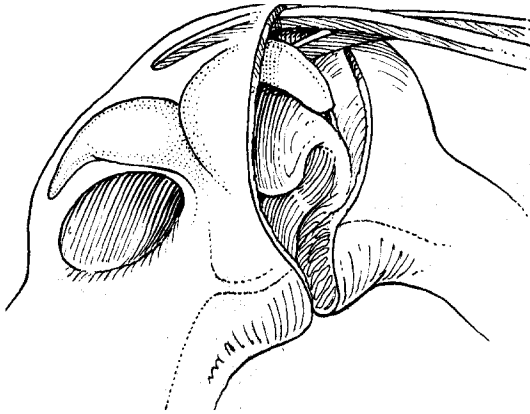


Fig 2 The complete mobilization of all the displaced nasal and lip elements is the key to ideal reconstruction.

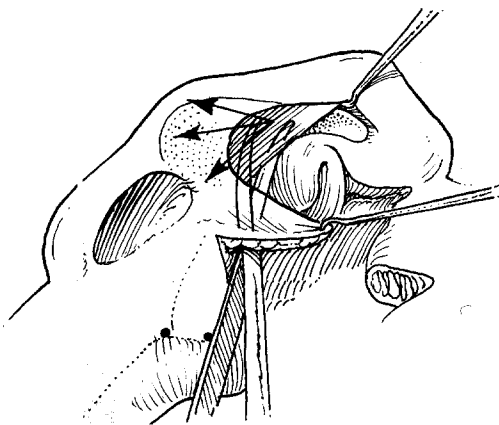


Fig 3 The remainder of the nasal and lip elements are mobilized through the medial lip incision.

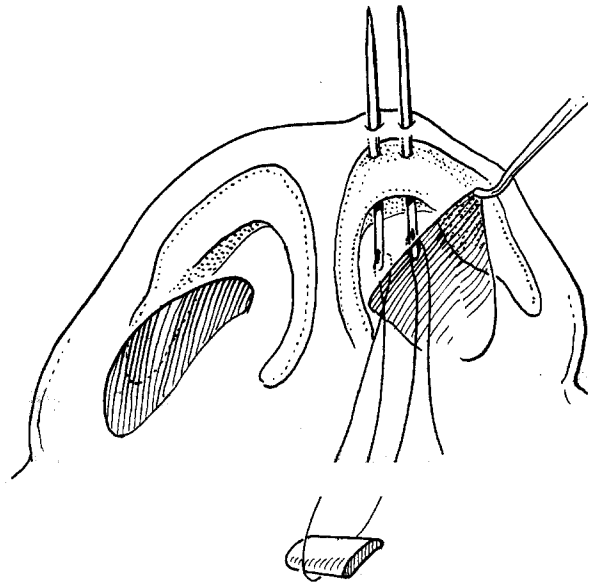


Fig 4 Straight Keith needles with dacryon pledgets are inserted intranasally through the nasal mucosa, lower lateral cartilage, and skin in the dome area. When tied, this suture will shift the alar dome to project the nasal tip.

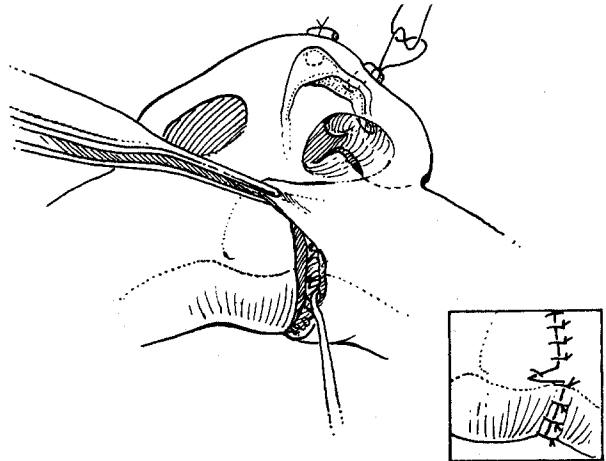


Fig 5 No tissue is discarded in the floor-of-the-nose reconstruction to avoid the creation of a small nostril.

have demonstrated early effective treatment protocols as well. In addition to the above-mentioned lack of documented long-term analyses of new treatment modalities, we face a number of challenges if we are to deliver this level of excellence of care for the children of the U.S., as well as worldwide.

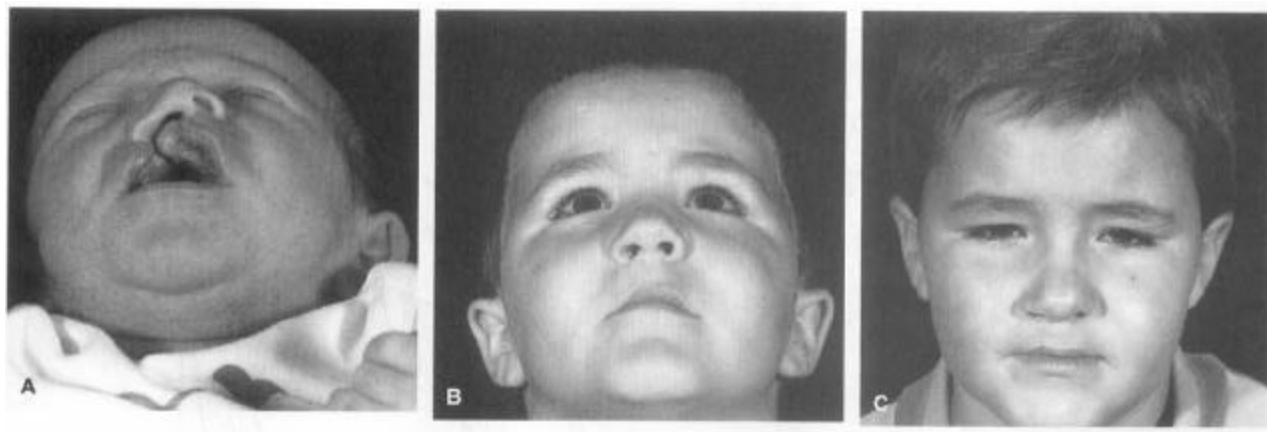


Fig 6. (A) An 8-day-old infant with a primary unilateral cleft lip and palate with nasal deformity on the right side. (B) The same patient 4 years after surgery with this technique. (C) The same patient 8 years after surgery with this technique.

In the U.S., managed care is restricting delivery of this level of excellence by denying orthodontic, speech, and other important team care and by obstructing or denying approval of ongoing protocols whose effectiveness have been demonstrated by the Dallas Cleft Lip & Palate Treatment Center and other centers of excellence. Managed care is fragmenting needed care by placing subspecialized care in the

hands of inexperienced surgeons and dentists who try a few cases and all too often produce disastrous results.⁸ Each year the Dallas Center sees a large number of early and late secondary cases which provide a sad testimony to this mistreatment

Outside the U.S., particularly in developing countries, the problem is far more severe. In areas where there are few trained surgeons and even fewer

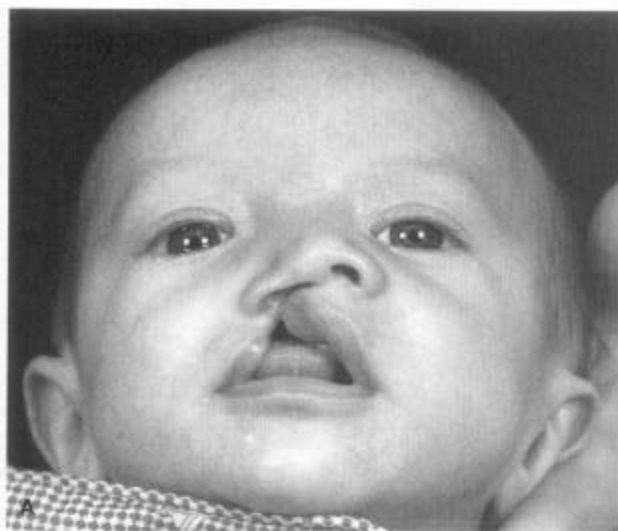


Fig 7. (A) A 2-month-old infant with a primary unilateral cleft lip and palate with a severe nasal deformity on the right side. (B) The same patient 18 years after surgery with this technique. Note the symmetry of the lip and nose. There is a defined Cupid's bow.

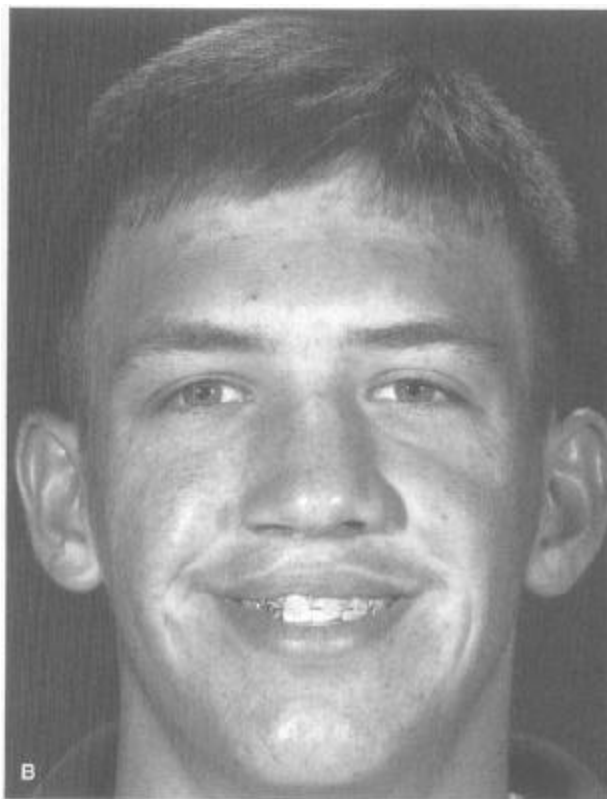




Fig 8. A 4-year-old secondary case referred for treatment with unacceptable results that are frequently seen today when performed by inexperienced surgeons.

medical centers with adequate equipment or supplies, the idea of dedicated multidisciplinary teams can seem like an almost impossible dream. The answer is not "mission" surgery. However admirable, the efforts of doctors who fly into an area, perform as many procedures as possible, and then move on, excellence of results simply cannot be achieved without a dedicated team which provides dedicated treatment for a child with clefting deformities from infancy to adulthood. Cleft lip and palate deformities are complex and difficult to treat for the best teams with many years of continuous experience. Simply put, inexperienced surgeons, often working without

a dedicated multidisciplinary team, can provide neither the level of technical expertise nor the ongoing patient follow-up required for excellent results.

Excellence is now within our reach—we have acquired the knowledge and technical expertise and developed and tested the protocols for delivering superior and effective cleft care. It is now our responsibility and privilege to assure that this level of care is available to all children who need it. In the U.S., leading centers of excellence must work collaboratively to assure that children in all parts of the country have access to needed care and to promote legislation to halt further erosion of services by the managed care industry. Worldwide, American and European centers must join together to foster the development and support of enough centers of excellence in the Third World to assure the delivery of state-of-the-art care over time with dedicated teams.

Kenneth E. Salyer, MD
Dallas, Texas

REFERENCES

1. De La Pedraja J, Erbella J, McDonald WS, Thaller S. Approaches to cleft lip and palate repair. *J Craniofac Surg* 2000; 11:562-571
2. Bardach J, Salyer KE. *Surgical Techniques in Cleft Lip and Palate*, 2nd ed. Chicago, IL: Year Book Medical Publishers, 1991
3. Salyer KE, Bardach J. *Atlas of Craniofacial and Cleft Surgery. Volume II: Cleft Lip and Palate Surgery*. Philadelphia/New York: Lippincott-Raven, 1999
4. Salyer KE. Primary correction of the unilateral cleft/lip nose: A 15-year experience. *Plast Reconstr Surg* 1986;77:558-566
5. Abyholm F, Bergland O, Semb G. Secondary bone grafting of alveolar cleft. *Scand J Plast Reconstr Surg* 1981;15:127-140
6. Buschang PH, Schroeder JN, Genecov E, Salyer KE. Growth status of children treated for unilateral cleft lip and palate. *Plast Reconstr Surg* 1991;88:413-419
7. Buschang PH, Porter C, Genecov E, Genecov D, Salyer KE. Face mask therapy of preadolescents with unilateral cleft lip and palate. *Angle Orthodont* 1994;64:145-150
8. Salyer KE. Guest editorial: Effects of managed care on the treatment of craniofacial deformities. *J Craniofac Surg* 1995; 6:4