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Reprinted from
Volume 47
Pages 27-32
July 1953

THE JOURNAL OF THE AMERICAN DENTAL ASSOCIATION

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One of the great problems in public health today is the treatment and care of the handicapped individual. In the execution of that treatment a major difficulty is the lack of co-ordination of specialized services.

In modern society specialization has developed to such an extent that there is danger that the specialties will grow out of proportion, throw the entire system out of balance and defeat the very ends they are designed to serve.

In the treatment of the patient with cleft palate, the need is imperative for a better understanding of the objectives and specific functions of the various specialties that must be integrated. The emphasis of this article is not on specific technical treatment but on co-ordination of services for the total rehabilitation of the patient.

In the last half century four separate organizations have been set up to deal with the problem of the handicapped. In 1919 the National Society for Crippled Children and Adults was established. Later the National Foundation for Infantile Paralysis was founded to provide more adequate service for the poliomyelitis victim. The former organization then assumed greater responsibility in the care of the cerebral palsy patient. Both of these foundations have annual drives, the "Easter Seal" and the "March of Dimes." Both are excellent organizations, doing splendid work.

The next development in the history of the care of the handicapped occurred when Sister Kenny arrived in America with a new idea for treating poliomyelitis. Since there was a difference of opinion about the treatment of the disease, a third national institution, the Sister Kenny Foundation for Infantile Paralysis, was established. The fourth group was The United Cerebral Palsy Foundation. Each of the four national foundations limits its services to specific conditions. Though great good is being done by these various organizations, there is bound to be some overlapping and duplication. In the common zeal for organization the primary purpose for which these organizations were established, that is, the care of the crippled child, must not be overlooked.

There is no doubt that blind spots do exist, that many other conditions just as handicapping as cerebral palsy and poliomyelitis are not getting a proportional amount of attention. The inclination towards duplication, a tendency common to all specialization, results from a refusal to see beyond one's own field. The only way to achieve clear thinking is to learn to treat the individual as a whole rather than to concentrate on a part of him. The future of the specialties depends on

Presented before the Section on Public Health Dentistry combined with the Section on Pedodontics, ninety-third annual session of the American Dental Association, St. Louis, September 11, 1952.

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Reprinted from The Journal of the American Dental Association, Volume 47, pages 27-32, July 1953.

a closer integration and co-ordination of all specialties wherever and whenever necessary. Unless a way is found to integrate, co-ordinate and correlate specialized training and knowledge with the services made possible by that knowledge, there will be an ever greater chaos of overlapping, duplication and blind spots. The responsibility falls on members of all professions to keep the services which they render in proper balance with the sum total of necessary and desirable services. If the specialties lose that balance, it is entirely possible that the government may step in to define the standard for future procedure.

For many years the cleft palate patient has been treated by various specialists, by the surgeon, by the dentist, by the speech therapist, each working separately, trying with the skill of his profession to solve the problem from that standpoint alone. Some have been successful, many have not.

From studies of the occurrence of cleft lip and cleft palate it is now fairly well established that one in 700 individuals is born with this form of nonunion and that therefore it is one of the most frequently found congenital deformities. With such a high ratio of occurrence and the large percentage of the population lacking medical and dental care, it is evident that a new public health need has come to light. Many states are meeting this problem by providing surgical care and hospitalization — already included in their crippled children's program — and in general limiting treatment to surgery. It is now recognized that surgery alone is not adequate in many of these cases; in fact, in some cases it is contraindicated. Recognizing the need for additional services, the Pennsylvania Assembly allocated funds whereby the Department of Health is now able to furnish all the services necessary for cleft palate therapy. A special division named the cleft palate division was set up under the bureau of maternal and child welfare. Thus, the State of Pennsylvania has made a valuable contribution to the cause of the cleft palate cripple.[1,2]

Ever since articles concerning the Lancaster Clinic appeared in several nationally circulated lay magazines, hundreds of letters have been received from all states in the Union and from many foreign countries. They are predominantly from people with cleft lip, cleft palate, or both. Aside from their great human interest, these letters contain enough description of procedures to warrant a complete study by everyone interested in the cleft palate situation. They magnify the need for a better understanding among the members of the various specialties providing treatment for the cleft lip or cleft palate patient.

There is a great difference of opinion in regard to the interpretation and establishment of a co-ordinated program. An unrelated step by step series of procedures is not true integration. The greatest good cannot be achieved by having the representatives of one specialty after another, under the guise of a correlated program, attempt to solve the problem with the method peculiar to the specialty. True integration starts with a meeting of the minds of the individuals who first examine the patient together and then agree on a program for treatment. The error to be avoided has been stated simply: "Men do not plan to fail, they fail to plan."

Plans should be formulated before any treatment is instituted. Figure 1 is a representation of the type of coordination desired. The spoke at the bottom of the wheel is the one bearing the weight at any particular time; but all other spokes have an equally distributed load, and each in its turn at some time is the key

1. Ivy, Robert H. Modern concept of cleft lip and cleft palate management. Plast. & Reconstruct. Surg. 9:121 Feb. 1952.

2. Cooper, H. K. Crippled children? Am. J. Orthodont. & Oral Surg. 28:35 Jan. 1942.

factor. Consequently the "when" of integration is extremely important.

GROUP PLANNING

This paper, itself the product of a group rather than of an individual, is a report on the procedure followed at the Lancaster Clinic. All problems are attacked with the individual, not the specialty, in mind. In every phase of the program the importance of group thinking in determining and following a course of action is recognized.

When a baby is born, as soon as the head leaves the perineum, any problem connected with that child is a pediatric not a surgical one.[3] If the child has a cleft lip, a cleft palate or both, it is the responsibility of the pediatrician to make the recommendation as to the time the surgery is expedient. The first operation is determined not by the calendar but by the condition and nutrition of the baby itself.

In all cases of cleft lip or cleft palate or both, only the lip is operated on at the first operation. After the surgical repair of the lip, periodically for several years the baby is seen by the surgeon, the pediatrician, the orthodontist and the speech therapist. During these visits an attempt is made to have the speech department and the psychological department give counsel to the parents or guardian of the child. The psychologist must emphasize the importance of a proper attitude toward the child. The over-protection which the average mother gives the patient is as great a hazard for the individual's future life as the deformity itself. Though these periodic visits may seem to some to be unnecessary, they are important in their psychological effect. At this stage it is the parents who are suffering from the trauma, not the child.

At the earliest age possible, a preliminary speech evaluation is made; an audiometric examination is given in order to discover a hearing loss as early as possible, since it may indicate disease of the ear besides being a tremendous hazard in acquiring good speech. All cases in which a hearing loss is discovered are referred to the clinic otologist. A hearing loss if neglected can become troublesome; the earlier it is recognized, the better is the chance of arresting the condition.

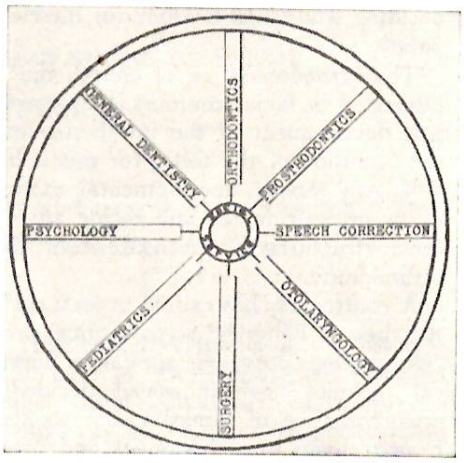

Fig. 1 • Services in a co-ordinated program. Other services to be added as need arises

As soon as possible, models of the baby's jaws, photographs of the face, and roentgenograms of the entire maxilla and mandible are taken without disturbing the child too much, for such agitation can interfere with future treatment.

After the findings of Brodie and Slaughter[4] and of Graber[5] concerning the damage that may be done by radical and injudicious surgery have been considered, the next step is the all important one of

3. Coursin, D. B. Treatment of patient with cleft palate; present day concepts of pediatric responsibility. Am. J. Dis. Child. 80:442 Sept. 1950.

4. Slaughter, W. B., and Brodie, A. G. Facial clefts and their surgical management in view of recent research. Plast. & Reconstruct. Surg. 4:311 July 1949.

5. Graber, T. M. Facial morphology in cleft palate and cleft lip deformities. Surg., Gynec. & Obst. 88:359 March 1949.

deciding what shall be done for the cleft palate.

The orthodontist[6] is, of course, much interested in facial contours, the growth and development of the jaw bones and the occlusion of the teeth, for this is his field. Any genetic, developmental, extrinsic or intrinsic factor influencing any of these structures is the concern of the orthodontist.

A controversy has existed at least since the time of Kingsley[7] as to surgical procedure versus prosthetic appliance. Surgical technics have improved decidedly since the time of Kingsley, but so also have technics in orthodontics and prosthetic dentistry. Anyone familiar with the literature of the past knows that the situation as it exists today is similar in many respects to that which existed in 1875. The real controversy lies in the treatment of the palate. It is agreed that whenever the prognosis warrants it, surgery should be done; but the problem which must be faced sooner or later is: How much surgery and what type shall be employed?

So far the results of the push-back operation appear negative. At the present, enthusiasm for the pharyngeal flap technic is high. It is hoped that the technic will prove to be so successful that it will eliminate the need for any speech appliance. Since frequently there are many other dental problems connected with these cases, those responsible for their treatment should avoid becoming "gadget conscious" and keep appliances to a minimum.

In the routine dental program, speech therapy is carried out simultaneously with dental treatment. Conditions are treated as they develop, but always with group consultation before measures are established. This is the method by which the "baby program" is carried out at the Lancaster Clinic.

An entirely different procedure is adopted for cases showing postoperative failure (Fig. 2). These cases come under the rehabilitation program; most of the patients are treated in residence. At no time in their treatment is any step instituted without using the team approach. Four to five hours daily are devoted to speech therapy. Recreation is supervised; arts and crafts are taught. Psychological advice and counsel are given with as great emphasis as possible placed on the spiritual values. Until a patient of this type has been taught to accept with "serenity the things we cannot change" and has gained "the courage to change the things we can and the wisdom to know the difference," no true and lasting rehabilitation can be accomplished.

Experience in the Lancaster Clinic shows that a great number of cases in the rehabilitation program are cases of surgical failures. The files are so full of case reports of multiple attempts at surgical closure that it seems imperative to call attention to the situation. Cases for which there are records of from 15 to 30 operative procedures on the palate are common. Too much surgery tends merely to add yet another handicap to the achievement of successful speech results.

RECENT LITERATURE

Recently Kazanjian[8] stated: "In my opinion the use of obturators should be limited to mutilated palates beyond the possibility of surgical repair." The Lancaster Clinic group feels that that attitude indicates a complete lack of consideration for a truly integrated program. Experience has shown that after surgical failure in successive operations the chance of acquiring good speech is greatly hampered. As far as appearance only is involved, considerable improvement is

6. Cooper, H. K. Responsibility of the orthodontist in the cleft palate problem. Am. J. Orthodont. & Oral Surg. (Oral Surg. Sect.) 32:675 Nov. 1946.

7. Kingsley, Norman W. A treatise on oral deformities as a branch of mechanical surgery. New York, D. Appleton & Co., 1880.

8. Kazanjian, V. H. Secondary deformities of cleft palates. Plast. & Reconstruct. Surg. 8:477 Dec. 1951.

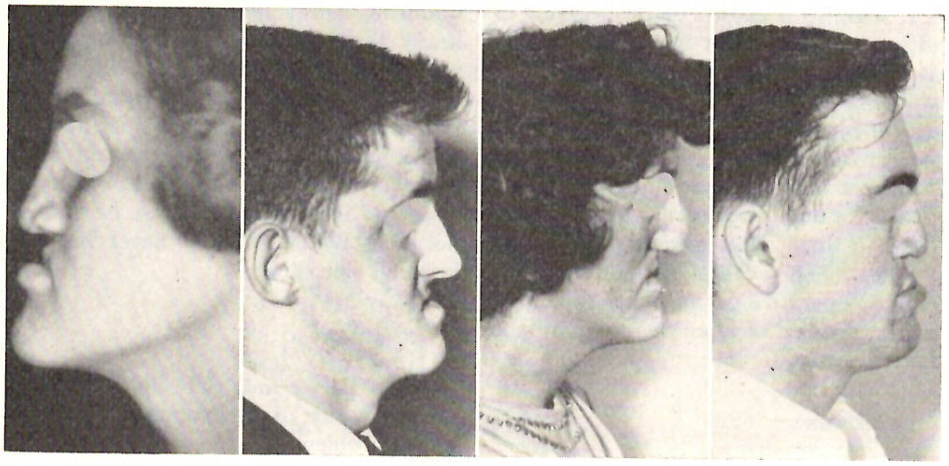

Fig. 2 • Typical deformities requiring coordination in dental and corrective surgical treatment

possible; but as far as speech is concerned, the prognosis is relatively poor.

When one reads that "the surgeon . . . is confronted with the responsibility for the attainment of normal speech in patients who have been operated upon unsuccessfully several times,"[9] one is forced to ask: "Why only the Surgeon?" If coordination of effort is to be really effective, it would naturally follow that all specialists who will eventually be called on for an opinion should be given that opportunity before too much damage has been done. Such an opportunity is provided at the Clinic through group evaluation made jointly by the plastic surgeon, the pediatrician, the otologist, the orthodontist, the dentist, the speech therapist and other specialists as indicated.

In the recent literature there are statements by conscientious men regarding the need for better understanding of the contributions of other specialties to the achievement of the final result.

Conway,[9] for example, in a discussion on the use of the artificial velum stated: "Objections to this practice are apparent at once. Such a contrivance represents at best an intra-oral crutch which requires frequent removal for the purpose of hygiene."

Since good hygiene, however, is admittedly an objective which should be paramount in every procedure, the need for it cannot be considered a disadvantage. On the contrary, it is desirable that an appliance can be removed for the purposes of hygiene. In many cases the soft palate has been closed, when from a hygienic standpoint there is so much mucus being secreted from the nasal surface that it not only becomes a speech and a health hazard but is certainly not hygienic. In fact, the very criticism of Conway on the need for cleanliness in the use of the appliance is a statement of its great advantage. Furthermore, Conway quotes thus from Dorrance:[9,10] "Excessive lymphoid hypertrophy, congestion of nasal mucosa . . . , all contributing to symptomatic halitosis, represent further argument against the continued use of these intra-oral appliances."

9. Conway, Herbert. Combined use of the push-back and pharyngeal flap procedures in the management of complicated cases of cleft palate. Plast. & Reconstruct. Surg. 7:214 March 1951.

10. Dorrance, George M., and Shirazy, Enayat. The operative story of cleft palate. Philadelphia, W. B. Saunders Co., 1933.

If halitosis is caused by the wearing of an appliance, a better understanding between specialties should be sought. Any well constructed appliance because of its ease of removal can be kept clean by the patient, and thus any cause of halitosis from that source can be eliminated.

Ivy[11] in discussing similar cases stated: "It is in these latter cases that a proper pre-treatment evaluation might have avoided operative catastrophes rendering any other form of later treatment all the more difficult."

COMMENT

Excellent plastic surgeons recently have declared that the newer technics, such as combination push-backs and pharyngeal flaps or pharyngeal flap procedures, have eliminated most of the disadvantages; but on this subject there is wide divergence of opinion. In a center such as the Lancaster Cleft Palate Clinic many cases show evidence of varying degrees of surgical failure. As time goes on, surgery will be able to overcome many of such deficiencies.

At the same time it must be recognized that even though the case is handled by the most skillful plastic surgeon the dental implications in a great majority of these cases are of paramount importance. Most of the cases involving the lip and alveolar process require dental treatment in some form if the best result is to be obtained. This statement is not meant to imply that dentistry is more important in a co-ordinated program but rather that it should be established as equal in importance to any other specialties already so recognized. The dentist should be a partner in the decision rather than an assistant. Responsibility must be shared not delegated; it should never be self-imposed nor shifted.

SUMMARY

1. Cleft palate and cleft lip because of the frequency of occurrence is a public health problem.

2. The defect should be handled similarly to other handicapping conditions such as poliomyelitis and cerebral palsy.

3. The treatment of the cleft palate or cleft lip patient requires the co-ordinated services of several specialists.

4. For cases of postoperative failure a rehabilitation program is required.

5. Because of the nature of the defect, there is particular need for the contribution of dentistry in a co-ordinated program for cleft lip and cleft palate patients.

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11. Ivy, Robert H. Recent trends in cleft palate treatment. Editorial. Plast. & Reconstruct. Surg. 5:537 June 1950.