Survey of Dentists' Experience with Cleft Palate Children in Chile

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Objective: **This study was designed to study the experience of dentists with children with palatal clefts seeking treatment in Santiago, Chile.**

Design: **A 13-item questionnaire was sent to 203 pediatric and general dentists treating children. Of the 141 dentists who voluntarily completed the questionnaire, 118 were selected for this study. These professionals worked in private and public health centers in the Santiago, Chile, metropolitan area.**

Results and Conclusions: **The results showed that a majority of dentists had treated a low number (1 to 3) of cleft palate children in the previous years, using a combination of preventive-curative and radical treatments. Although a majority reported that there were no differences in the treatment of the cleft and noncleft children, a majority had problems during the course of treatment. The results suggest the need for more current information about the care of cleft children.**

KEY WORDS: *cleft care, cleft palate children, pediatric and general dentist, survey*

One of the malformations that specifically affect a dentist's daily practice is the cleft lip or palate. In view of the national incidence of this congenital anomaly (1 per 650 live births) in the population of Chile, this malformation can be considered a public health problem (Nazer et al., 1978, 1979, 1980; Cauvi and Palomino, 1983, 1984; Hook, 1988)

It is important that pediatric and general dentists be familiar with the dental anomalies patients with cleft lip or palate may present, so that they can provide appropriate treatment (Kaufman, 1991). Cleft patients have a right to receive preventive and curative dental treatment as part of their comprehensive treatment. Preventive therapy should be started at birth.

When the pediatric or general dentist has finished treatment, he or she should orient the patient to the rehabilitation process, sending the patient to the orthodontist, prosthodontist, or to any other professional according to the patient's needs. A healthy permanent dentition is extremely important for successful treatment, as it frequently influences the patient's esthetics and self-esteem.

Several survey research studies on the subject of cleft palate patients have been published in the United States, England, and Chile. These surveys have been aimed at health professionals (Pannbacker, 1976; Pannbacker et al., 1979, 1992; Noar, 1992; Dabed and Cauvi, 1996), health career students (Lass et al., 1973; Pannbacker, 1976; Pannbacker et al., 1979; Vallino et al., 1991, 1992), kindergarten and basic education teachers (Finnegan, 1982), patients (Noar, 1991), parents (Pannbacker, 1976; Pannbacker et al., 1979; Noar, 1991; Pannbacker and Scheuerle, 1993), and the general public (Middleton et al., 1986). In 1979, Pannbacker et al. also studied the experience of professionals (surgeons, dentists, and speech pathologists) with cleft palate. Their results showed that although 96% of the plastic surgeons and 87% of the speech pathologists had worked with these patients, 56% of the dentists had not. Other investigations have studied the experience of dental and medical students (Lass et al., 1973; Pannbacker et al., 1979; Vallino et al., 1991, 1992), general and special educators (Finnegan, 1982), and parents (Pannbacker et al., 1979) with children with cleft lip or palate.

The goal of the present research project was to study the experience of dentists with children with palatal clefts. The study specifically targeted patients seeking treatment at various private and public health centers located in the metropolitan region of Santiago, Chile. This information was sought to determine whether these professionals need more information and clinical experience in their dental school curricula and, if necessary, a book with current information about the care of children with cleft palate.

Subjects and Procedures

A questionnaire (see Appendix) was designed to elicit anonymous responses from dentists regarding their odontopediatric experience with operated cleft lip and/or palate children. This survey was aimed at pediatric and general dentists treating children in private health centers (private practice and ISAPRES) and in public health services (primary care [municipal health centers] and secondary care [hospitals]). The ISAPRES programs are private health-care institutions, and their members pay 7% of their monthly salary to participate.

Professor Dr. Cauvi is Director of the Institute of Rehabilitation of Facial and Maxillary Malformations and Deformations (IRMADEMA), Odontology School, University of Chile. Dr. Dabed is a dentist who works with cleft palate children at IRMADEMA and at the Gantz Foundation, where she provides pediatric dental treatment.

Submitted October 1997; Accepted May 1998.

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TABLE 1 Number of Dentists Who Had Seen Children with Cleft Palate in Their Workplace

Where Treated	*n*	*%*
Private practice	12	17.1
ISAPRES	12	17.1
Municipal health	28	40.0
Hospital	17	24.3
Not treated	1	1.4
Total	70	100.0

Part A of the questionnaire contained two questions. The respondents were asked if they had seen cleft children in their practice, and if so, if they had treated them.

Part B consisted of six questions aimed at dentists who had seen and treated children with clefts in the past 2 years. The dentists were asked about the number of cleft palate patients treated, the age range of the children, who referred them, and the kind of treatment provided. They were also asked about differences between the treatment of cleft and noncleft children, and about the problems encountered during the treatment of the children with clefts.

Part C was composed of five questions aimed at both the dentists who had and those who had not treated children with clefts. The dentists were asked if they felt capable of managing these children; to whom they would send such a child for additional consultation; if they knew about a multidisciplinary center named the Rehabilitation Institute of Facial and Maxillary Malformations and Deformations (IRMADEMA) of the Odontology School, University of Chile, and the services it provides; if they felt children with cleft malformations needed a multidisciplinary care team; and if they felt that current information about the care of these children should be available in book form.

A pilot survey was done with five pediatric dentists and five general dentists. These dentists made some suggestions, which were incorporated in the final form of the questionnaire.

The next step was to select the health centers whose dentists would receive the questionnaire. The dental director of each center listed in the Santiago, Chile, telephone directory was contacted by phone and invited, with his staff (pediatric and general dentists), to participate in this survey. A total of 203 questionnaires were sent to these centers, according to the number of pediatric and general dentists on staff.

Of 203 questionnaires sent out, 141 were voluntarily completed by the dentists. Twenty-three of the 141 questionnaires were excluded from the analysis because they were answered by general dentists who did not treat children, because they were incomplete, or because the questions were misunderstood.

TABLE 2 Number of Dentists Who Had Treated Children with Cleft Palate in the Past 2 Years

No. of Children Treated	*n*	*%*
1–3	46	68
4–8	12	18
9 or more	5	7
No answer	5	7
Total	68	100

TABLE 3 Number of Dentists Who Had Treated Children with Cleft Palate by Age Range

Age Range	*n*	*%*
3–6 years	9	13
7–15	34	50
3–15	16	24
No answer	9	13
Total	68	100

If a dentist responded that he had seen and treated cleft palate children in more than one workplace, the study considered his responses to reflect the place where the questionnaire was delivered. If the dentist indicated that he had practiced cavity filling, root canal and/or other treatments, such as hygiene and prevention, the study considered these to be preventive-curative treatments. If the dentist responded only that extractions were performed, the treatment was considered a radical one for this study.

Results

Of the 118 responding dentists, 70 (59%) had seen cleft palate children, and only one dentist had not provided treatment (Table 1). Therefore, 69 dentists (59**%**) had seen and treated these children. The largest percentage of dentists (40%) treating children with cleft malformations worked in municipal health services.

Of the 69 dentists who had treated these children, one dentist had not treated cleft children in the previous 2 years. Of the remaining 68, a majority (68%) had treated a low number of children (1 to 3) (Table 2), and the majority (50%) had treated children between the ages of 7 and 15 years of age in the previous 2 years (Table 3). Sixteen dentists (24%) had treated children in both age ranges (3–6 years and 7–15 years).

The largest percentage of dentists (41%) had seen these children for treatment without referral by another person. Sixteen dentists (24%) indicated that the cleft children had been sent to them from more than one source (their patients, other dentists, medical doctors, friends, and by themselves) (Table 4).

A majority of the dentists (56%) had treated the children

TABLE 4 Referral Sources

Means of Referral	*n*	*%*
Other patients	2	3
Other dentists	15	22
Medical doctors	4	6
Friends	1	1
Self	28	41
More than one source	16	24
No answer	2	3
Total	68	100

TABLE 5 The Number of Dentists Providing Various Kinds of Treatment to Children with Cleft Palate

Kind of Treatment	*n*	*%*
Preventive-restorative	24	35
Extraction	5	7
Preventive-restorative + extraction	38	56
No answer	1	2
Total	68	100

with a combination of preventive-restorative procedures and extraction according to the needs of the patient (Table 5).

Treatment described by the dentists as complex included extremely large cavities in the crowns that required special filling material (metallic crowns, light-cure glass ionomer) not readily available, multiple root canal procedures in deciduous molars, difficulty in approaching the carious lesion due to dental position anomalies, difficulty in achieving anesthesia, and the need to consult a multidisciplinary care team because of dental anomalies (i.e., hypodontia) (Table 6).

The expression ‘‘hard to handle’’ was used by the dentists to refer to several problematic behaviors. For example, some of these children exhibited fear of dentists, and some cleft children presented with residual oronasal fistulas. Finally, most were mouth-breathers and therefore had trouble breathing during treatment.

A majority of the dentists (59**%**) perceived no differences in the treatment of cleft and noncleft children. Nevertheless, a majority (69**%**) had experienced trouble with the treatment of these children, reporting problems such as complex treatment (37%), hard to handle during the treatment (22%), and a combination of both problems (10%).

Of the 118 dentists surveyed, most (94%) felt capable of giving pediatric dental care to children with cleft palate. The largest percentage of dentists (41%) would send cleft patients to institutions specializing in malformations or would consult with members of those institutions in the event that they thought it necessary (Table 7). Thirty-four dentists (29%) would consult both specialized institutions and specialists (e.g., orthodontists, maxillofacial surgeons).

TABLE 6 Comparison of Perceived Differences in the Treatment of Cleft Versus Noncleft Children, and the Problems Experienced During Treatment of the Children with Cleft Palate

Differences	*n*	*%*	*Problems*	*n*	*%*
No	40	59	none	14	21
			complex treatment	16	24
			hard to handle	4	6
			complex + hard to handle	1	1
			no answer	5	7
Yes	26	38	complex treatment	9	13
			hard to handle	9	13
			complex + hard to handle	6	9
			no problem	1	1.5
			no answer	1	1.5
No answer	2	3	hard to handle	2	3
Total	68	100	Total	68	100

TABLE 7 Number of Dentists Who Would Consult or Send Patients with Cleft Malformations to Other Health Professionals or Centers

Type of Consultation	*n*	*%*
Specialized institutions	48	40.7
Specialists	22	18.6
Colleagues	7	5.9
Institutions + specialists	34	28.8
No answer	6	5.1
Do not know	1	0.9
Total	118	100.0

A majority of the dentists (55%) did not know about IRMADEMA and the kind of services it provides (Table 8). Fifty-two of the dentists (44%) did know of the existence of IRMADEMA, but only 12 (10%) knew about the care available there.

Almost all the dentists (99%) considered a multidisciplinary team necessary for the care of cleft children. Of these, all but three indicated which professionals should make up such a team.

Finally, 113 of the dentists (96%) thought that current information about the care of children with cleft malformations should be available in book form.

Discussion

In the present study, 59**%** of the pediatric and general dentists surveyed treated children with repaired clefts. Pannbacker et al. (1979) found that 44**%** of the dentists surveyed reported clinical experiences with cleft patients. That study, however, cannot be considered comparable to the present investigation because the surveyed dentists study were selected at random and were not identified as pediatric dentists, general dentists attending children, or by any other specialty.

Although a majority of the dentists surveyed in our study had experience with these patients, the majority had treated only 1 to 3 children in the previous 2 years. This low number may be due to the availability of centers that specialize in the care of children with cleft palate and because of the large number of dentists would consult or send patients to institutions specializing in malformations. This result may be explained by the fact that almost all of the dentists thought that these children need a multidisciplinary care team. Nevertheless, a majority did not know of IRMADEMA, which has been a part of the Odontology School of the University of Chile since 1985.

TABLE 8 Number of Dentists Reporting Knowledge of the Existence of the Institute of Rehabilitation of Facial and Maxillary Malformations and Deformations (IRMADEMA) and the Care Offered to Cleft Children

Knowledge of IRMADEMA	*n*	*%*
Did not know	65	55
Yes, only the name	40	34
Yes, name and kind of care	12	10
No answer	1	1
Total	118	100

Many dentists treated children between the ages of 7 and 15. This result is consistent with the fact that the majority of the municipal health centers prefer to treat children who have reached 6 years of age. Children 6 years and older are easier to handle and can tolerate a greater variety of treatments.

A majority of the dentists did not perceive differences in the treatment of the cleft and noncleft children. Nevertheless, a majority reported having problems during the treatment of children with cleft palate, indicating that these patients needed complex treatment or were hard to handle. This inconsistency might have been due to a misinterpretation of the questions, to ambiguity in the questions themselves, or may indicate that the dental needs of these children are both greater and more severe than those of noncleft children, which means that the dentists need more time to provide treatment.

None of the studies cited can be compared with the present investigation, as the other survey studies on this subject were aimed not at pediatric and general dentists, but at other health professionals, health profession students, kindergarten and basic education teachers, patients, parents, and the general public.

Conclusions

The results of this study allow us to reach the following conclusions:

1. A majority (59%) of the dentists surveyed (pediatric and general) had experience with children with cleft palate.
2. Despite the existence of a high incidence of this malformation, the surveyed dentists who worked in public and private health services saw a relatively low number of children with clefts for pediatric dental treatment. Therefore, their clinical experience with these patients is lacking.
3. Many of the dentists surveyed treated children from the age of 7 years, despite the fact that preventive therapy should be started at birth.
4. More information and clinical experience with children with cleft palate is necessary in the dental school curricula.
5. Dentists and patients need to have a better awareness of IRMADEMA and the care it gives to children with cleft palate.
6. A book with current information about the care of children with cleft palate would be beneficial.

Acknowledgments. The authors thank the following persons for their assistance: Dr. María J. Ravera for her advice in the questionnaire design, Dr. Benjamín Martinez for his statistical analysis, and Karen Ekchart for her assistance in translating of the manuscript. We also thank all the dentists who took the time and effort to complete and return the questionnaire.

References

Cauvi D, Palomino H. Rehabilitación del niño portador de labio leporino y/o fisura velopalatina en un enfoque multidisciplinario. *Rev Fac Odont Univ Chile* 1983;1(1):51–53.

Cauvi D, Palomino H. Malformaciones congénitas en familiares de individuos portadores de labio leporino o fisura velopalatina en un centro de rehabilitación. *Rev Chil Ortodoncia* 1984;1(1):61–65.

Dabed C, Cauvi D. Encuesta a odontólogos generales y odontopediatras, en relación a sus conocimientos sobre los niños con labio leporino y/o fisura velopalatina. *Rev Fac Odont Univ Chile* 1996;14(2):16–26.

Finnegan DE. General and special educators' basic information and experience with cleft palate. *Cleft Palate J* 1982;19:222–229.

Hook EB. ''Incidence'' and ''prevalence'' as measures of the frequency of congenital malformations and genetic outcomes: application to oral clefts. *Cleft Palate J* 1988;25:97–102.

Kaufman FL. Managing the cleft lip and palate patient. *Pediatr Clin North Am* 1991;38:1127–1147.

Lass NJ, Gasperini RM, Overberger JE, Connolly ME. The exposure of medical and dental students to the disorder of cleft palate. *Cleft Palate J* 1973;10: 306–311.

Middleton GF, Lass NJ, Starr P, Pannbacker M. Survey of public awareness and knowledge of cleft palate. *Cleft Palate J* 1986;23:58–61.

Nazer J, Diaz G, Pizarro MT. Malformaciones congénitas, I: estudio clínico y epidemiológico. *Pediatría (Santiago)* 1978;21:295–303.

Nazer J, Diaz G, Diaz MI. Malformaciones congénitas, V: craneofaciales. *Pediatría (Santiago)* 1979;22:220–226.

Nazer J, Diaz MI, Diaz G. Malformaciones congénitas, VI: labio leporino y/o paladar hendido. *Pediatría (Santiago)* 1980;23:11–17.

Noar JH. Questionnaire survey of attitudes and concerns of patients with cleft lip and palate and their parents. *Cleft Palate J* 1991;28:279–284.

Noar JH. A questionnaire survey of attitudes and concerns of three professional groups involved in the cleft palate team. *Cleft Palate J* 1992;29:92–95.

Pannbacker M. Survey of publications for parents of cleft palate children: a preliminary report. *Cleft Palate J* 1976;13:57–60.

Pannbacker M, Lass NJ, Starr P. Information and experience with cleft palate: students, parents, professionals. *Cleft Palate J* 1979;16:198–205.

Pannbacker M, Lass NJ, Scheuerle JF. Survey of services and practices of cleft palate–craniofacial teams. *Cleft Palate J* 1992;29:164–167.

Pannbacker M, Scheuerle J. Parents' attitudes toward family involvement in cleft palate treatment. *Cleft Palate J* 1993;30:87–89.

Vallino LD, Lass NJ, Pannbacker M, Klaiman PG, Miller P. Dental students' knowledge of and exposure to cleft palate. *Cleft Palate J* 1991;28:169–171.

Vallino LD, Lass NJ, Pannbacker M, Klaiman PG, Miller P. Medical students' knowledge of and exposure to cleft palate. *Cleft Palate J* 1992;29:275–278.

Appendix

Questionnaire to Dentists on the Treatment of Children with Cleft Lip and/or Palate

Dear Dr.

First of all, we want to thank you for your valuable contribution to this research.
Please answer this questionnaire *anonymously*. It will be part of a research paper for the Institute of Rehabilitation of Facial and Maxillary Malformations and Deformations (IRMADEMA), which belongs to the Odontology School of the University of Chile. This paper will deal with the treatment of children with cleft lip and/or palate.
If you have questions, please contact Dr. Cynthia Dabed (phone number: 639.89.56).
Mark an X in the boxes you choose, and fill in the information in ink as required.

General Information

Workplace

Private practice: ☐ ISAPRES: ☐ Municipal health center: ☐ Hospital: ☐

Sex: F ☐ M ☐ Graduate from University: ____________________

Date of degree: __________ Specialization: ____________________

Certification: YES ☐ NO ☐

Part A

1. Have you received children with cleft lip and/or palate in your practice? YES ☐ NO ☐
2. If you answered YES to the *above* question:

   Have you treated these children? YES ☐ NO ☐

   Where? ____________________

   ____

Part B

If you answered YES to the previous question:

1. How many children in the last 2 years? 1–3 ☐ 4–8 ☐ 9 or more ☐
2. Between what ages? 3–6 years ☐ 7–15 years ☐
3. Who sent them to you?

   A patient ☐

   Another dentist ☐

   A medical doctor ☐

   A friend ☐

   Self ☐
4. What was the treatment?

   Cavity filling ☐ Extraction ☐

   Root canal ☐ Other ☐ ____________________
5. Was there any difference between the treatment given to noncleft and cleft children? YES ☐ NO ☐

   Explain: ____________________

   ____

6. In your opinion, the professional care given to the patient with cleft lip and/or palate means:
   - Hard to handle ☐ Explain: ______
   - Complex treatment ☐ Explain: ______
   - Others ☐ Explain: ______
   - No problem ☐

Part C

1. Do you think that you, as a pediatric or general dentist, are capable of treating cleft lip and/or palate children (hygiene, fluoride topical application, sealings, cavity fillings, etc.)? YES ☐ NO ☐
2. If you need advice during the course of treatment of a cleft palate child, who would you consult or send the child to?
   - Another colleague ☐
   - Another specialist ☐ Which one? ______
   - An institution specializing in malformations ☐ Which one? ______
   - Do not know ☐
3. Do you know about the Institute of Rehabilitation of Facial and Maxillary Malformations and Deformations (IRMADEMA), which belongs to the Odontology School of the University of Chile? YES ☐ NO ☐

   If YES, do you know what kind of care IRMADEMA offers children with cleft lip and/or palate? (describe)

   ______
4. Do you think the cleft child needs a multidisciplinary care team? YES ☐ NO ☐

   If YES, who should make up this team? ______
5. Do you think that current information about the care of these children should be available in book form? YES ☐ NO ☐

THANK YOU FOR YOUR CONTRIBUTION