BOOK REVIEWS

Cleft lip and palate: Surgical, Dental, and Speech Aspects. Edited by William C. Grabb, M.D., Sheldon W. Rosenstein, D.D.S. and Kenneth Bzoch, Ph.D. 916 pp. Boston: Little, Brown & Co., 1971.

Drs. Grabb, Rosenstein and Bzoch and their co-authors (69 in number), are to be congratulated on the production of this treatise. The purpose "has been to assemble an all encompassing test on the interdisciplinary science and clinical art of habilitating the large population of human beings born with cleft lip and palate and related disorders".

The book is some 916 pages in length and is divided into 5 parts:

I. General aspects of cleft lip and palate.
II. Surgical aspects of cleft lip and palate.
III. Maxillary orthopedics and bone grafting in cleft palate.
IV. Dental aspects of cleft lip and palate.
V. Speech and hearing-communicative disorders related to cleft lip and palate.

Forwards by Robert H. Ivy (surgical aspects), Herbert K. Cooper (dental aspects) and Harold Westlake (speech aspects) are not to be skipped over for they contain broad historical background material and introduce the organized team approached to the management of the patient with the cleft lip and palate.

Part 1 consists of 10 chapters. The basic anatomy of the lip and palate are presented first by Bresia. Patton's account of the embyology of the maxillofacial region is excellent; it is well illustrated and choice references on the subject are provided. Our present knowledge of the etiology of cleft of the lip and palate has been summarized by Frazier. The principles and methods of classifying these deformities are dealt with by Berlin. The classifications of the American Cleft Palate Association and that of Kernahan and Stark are preferred. An account of the growth and development of the mandibular and nasomaxillary complex is presented in an interesting manner by Enlow. The diagrams are well done and the bibliography appears selective. Facial growth is discussed in terms of functional cranial analysis by Moss. The postoperative growth of the child with a cleft palate is considered in the functional context. Koepp-Baker elaborates upon the concept of the cleft palate team and its composition. The psychological aspects of having a cleft are adequately described by Wirls. In his opinion, research on the psychological and social aspects of the cleft palate patient have not demonstrated convincingly that children with a cleft palate are psychologically different from unaffected children.

A chapter on the cultural aspects of cleft lip and palate by Ortiz-Mon-

asterio and Serrano provides interesting reading. The relationship of their patients to the pre-Columbian culture are unique and of special appeal to this reviewer. Rogers' history of the treatment of the cleft of the lip and palate is well done. Illustrations are plentiful and interesting. The bibliography is impressive. This is the final chapter of the section.

In this otherwise fine first part, it is difficult to understand why a summary of the pathological anatomy of the labial and palatal clefts was not included.

Part II is divided into subdivisions and 25 chapters. It is concerned with surgical aspects of clefts of the lip and palate. Almost one half of the pages of the entire book are occupied by this subject.

In Section A, the unilateral cleft lip is considered initially. The general aspects of the repair of the unilateral cleft are summarized by Musgrave. An historical account and an evaluation of the various reparative lip operations performed today are included in this chapter. Millard details rotation advancement in the repair of the single cleft. The triangular flap repair is advocated by Randall. The correction of the unilateral cleft lip deformity using a quadralateral flap is presented in its several aspects by Thompson. A chapter by Berkeley concerns the correction of nasal deformities accompanying the single cleft. A discription of the management of the secondary deformities of the lip and nose are given by Kazan and Converse.

Section B begins with an introductory chapter on the repair of bilateral clefts of the lip. The basic features of the surgical care and a variety of methods of repair are described in an orderly and concise manner. In subsequent chapters, the use of lip adhesions to convert a complete cleft of the prepalate into an incomplete cleft is shown by Randall and Graham. Skoog's method of repair of unilateral and bilateral cleft lips is described by its originator. In this chapter, one finds a detailed account of Professor Skoog's vast experience in the management of lip deformities. Millard shows the application of the rotational advancement flap to bilateral repairs. The surgical repositioning of the premaxilla is condemned by Bauer, Trusler and Tondra. They advocate in their method of cheilorraphy, nonsurgical repositioning through early closure of the lip and muscular folds. Procedures for correcting the nasal deformities accompanying bilateral cleft of the lip are described by Pigott and Millard. In the following chapter, Harding selectively reviews the secondary procedures which may be implemented to improve the already repaired bilateral cleft lip.

In Section C and in the final pages dealing with clefts of the lip De Myer provides the reader with an exceptionally fine presentation on the median cleft. Although limited in length it is inclusive and well illustrated. The bibliography is selective. Extensive reconstructive procedures are rarely indicated in such patients.

The subject of cleft palate surgery is introduced in Section D by Grabb.

The general aspects of the primary reparative procedures are reviewed. In the following chapter, Lindsay gives an interesting historical account of the Von Langenbeck palatorrhaphy; the operative technique is described. The use of a primary pharyngeal flap and palatorraphy is detailed by Stark and Friteck. The advantages of velar closure are presented by Slaughter and Brodie. Well executed diagrams accompany Calnan's fine description of the V-Y pushback palatorraphy. Cronin describes his employment of nasal mucosa flaps in the pushback palatorraphy. The instruments necessary for this procedure are depicted. The pushback palatorraphy incorporating an island flap to the nasal surface is the subject of a chapter by Batstone and Millard.

Section E is entitled "Cleft Palate-secondary Procedures". Techniques for the correction of palatopharyngeal incompetence are described by Yales and Chase (history, evaluation, treatment, pharyngeal flap and muscle transfer operations); Blocksma (implants in posterior pharynx); and Lang (obturator and speech appliance). This is a comprehensive chapter which is well done. The chapter by Oneal deals with the etiology and surgical management of oronasal fistulas. Dingman and Dodenhoff describe the methods for surgical correction of mandibular deformities. The accompanying diagrams and models are well chosen. Obwegeser's account of the surgical correction of maxillary deformities is excellent. There are numerous photographs which further add to his comprehensive account. This part closes with a chapter on the Pierre Robin syndrome written by Randall and Hamilton.

Part III is entitled "Maxillary Orthopedics and Bone Grafting in Cleft Palate". Amazingly, and with great disappointment to this reader, the entire section was alloted only one chapter. The sole chapter is well written but short. It includes a brief historical review and details the concepts and techniques of Monroe and Rosenstein. It is difficult to understand why the editors did not include chapters presenting the work and opinions of other recognized surgeons experienced in bone grafting and maxillary orthopedics. The value of the book is distinctly less for these omissions.

Part IV is concerned with dentistry as it pertains to the care of the cleft palate patient. Three chapters comprise this portion of the book. They deal with pediatric dentistry (Olsen), Orthodontics (Olin) and prosthetics (Adesman). These are well written and well illustrated chapters. They probably provide sufficient material to meet the objective of this book but it could well have been of greater proportion.

Part V relates to the communicative (speech and hearing) disorders of patients with clefts of the lip and palate. It is divided into two portions. Section A concerns the causes of cleft palate speech. Bzoch introduces the subject with a discussion of the etiological factors related to cleft palate speech. The subsequent chapters concern congenital and acquired palatopharyngeal insufficiency (Bradley), dental and occlusal hazards to normal

speech production (Starr), the influence of hearing impairment (Pollock), oral sensory function in speech production (Shelton) and psychological problems related to speech and language development (Smith).

Section B deals with the types of cleft palate speech introduced again by Bzoch. His chapter concerns the catagorical aspects of cleft palate speech. It is followed by Faircloth and Faircloth's account of delayed language and linguistic variations. Abnormal articulation patterns are described by Morris. Section C concerns itself with the analysis of cleft palate speech. Bzoch presents the measurements of parameters of cleft palate speech. Chapters follow by Hammer on electromyographic measures, Williams on the application of radiological measures and Cole on electrical capacitance measures of oropharyngeal functions. Counihan describes the measurements of oral and nasal airflow and airpressure. Counihan writes on oral and nasal sound pressure measures and Swartz on acoustic measures of nasalization and nasality. Shames and Runib provide a chapter on psycholinguistic measures of language and speech.

Section D containing the final chapters, is devoted almost entirely to speech therapy. It is initiated by Bzoch who writes on the rationale, methods and techniques of cleft palate speech therapy. Hahn considers directed home training programs for cleft palate infants. Stimulating language and speech development in cleft palate infants is presented by Phillips. Chapters on the advantages of intensive summer training programs by Shendel and Bzoch and direct muscle training for the improvement of velopharyngeal function by Cole follow.

The final chapter of the book is by Stool. It is entitled "Diagnosis and Treatment of Ear Disease in Cleft Palate Children". It is concise. Indeed it is much too concise. Again one finds it difficult to understand why less than 10 pages are devoted to the otolaryngological aspects of the car of the patient with a cleft of the lip and palate. It would have been of real added value to have at least several chapters devoted to this subject.

In general this is a fine text. It has its omissions. It is highly recommended for reading by those in the several disciplines concerned with the treatment of cleft lip and palate.

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A Cleft Palate Team Addresses the Speech Clinician. Edited by Mervyn L. Falk, Ph.D. Springfield, Illinois: Charles C. Thomas. 1971. $11.25.

In accord with the title of this book, the Cleft Palate Team members of the Children's Hospital of Michigan, Detroit, Michigan, and the Michigan Department of Health present a clear and comprehensive overview of the current thinking of each of the participating specialists in the management of the cleft palate child. The occasion of the presentation was a

two-week Cleft Palate Institute for School Speech Clinicians sponsored by the Wayne State University Speech and Hearing Center in August, 1968.

This book really very adequately reviews everything you want to know about cleft palate and associated problems. The synergistic effectiveness of the team approach to cleft palate is emphasized by Dr. J. Hilliard Hicks, D.D.S., the orthodontic member of the Children's Hospital of Michigan, in his complete review of current available orthodontic techniques. He stresses the value of the team approach both as to the benefit of the patient as well as to the participants in their program.

Dr. William G. McEvitt, the plastic surgeon member of the Children's Hospital of Michigan, is the pioneer in the introduction of the Veau-Wardill pushback palataplasty in the United States. His presentation of cleft palate surgery is an excellent monographic review of the development of cleft palate surgery in the United States. For the benefit of the patient, he stresses the need of separate or individual examinations by each consultant and specialist and then a combined meeting as the preferred clinical management. His remark of the "patient with his parents playing the role of host and being visited in his room by the members of the panel" is noteworthy.

A complete and excellent mongraphic review of otologic problems of the cleft palate child is presented by Ned I. Chalat, M.D. The chapter on "Psychiatric Considerations of the Cleft Palate Child" is comprehensively reviewed by Dr. Joseph Fischoff, psychiatrist, in a practical no-nonsense presentation. I found it very revealing and providing psychiatric advice for that extra dimension of care so urgently required by the cleft palate child.

This book presents in a holistic form, monographs for each of the participating specialists comprising a cleft palate team. The anatomy of the cleft palate team as presented consist of the following specialists; pedodontist, orthodontist, prosthodontist, oral surgeon, plastic surgeon, pediatrician, audiologist, otologist, speech pathologist, public health nurse, social worker, psychologist and educator. In the Children's Hospital of Michigan these specialists provide intra-disciplinary and cross-disciplinary care in depth to the cleft palate child for the efficient management of the cleft palate problem and their associated problems. This book emphasizes that the pediatrician must realize that 33% of children with cleft palate demonstrate other congenital deformities and defects.

This book is a landmark in cleft palate management and of value to those involved in providing such care as well as to the parents of cleft palate children and is "must" reading for those so concerned.

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Orthodontics in a Multidisciplinary Rehabilitation Program. HERBERT L. HAYWARD, D.D.S., PH.D.

The expressed purpose of this monograph is to examine the author's experience regarding the role of orthodontics in the delivery of comprehensive health service.

The emphasis here is on the group practice type of health care. The prime example of such care being the Cleft Palate Team, which the author calls, "A prototype for Dentistry in Comprehensive Medicine". This certainly is a good example, but fortunetely the cleft palate problem is not a typical dental problem. The average dental problem is much less complicated and usually very capably handled by the well trained modern dentist.

The question properly posed is what changes in the character and method of dental practice are demanded by the insights provided by advances in research, and by the rapidly increasing tools of modern technology.

While the centralized (hospital) type of health delivery may be the answer to make use of computers and other modern technological gadgets, it hardly solves the problem of the proper distribution of health personnel.

These centralized facilities are most usually practical in large urban centers where there are usually more than adequate numbers of dentists, while in areas where population is dispersed, the centralized service would be most convenient to those close by whereas it would be a hardship on those farthest away.

Needless to say, this type of practice is not a new concept; the military hospitals and Veteran's hospitals and University Centers, for example, are excellent illustrations of this type of facility.

Some important weaknesses inherent in these practices are the dangers of over consultation with specialists and the tendency for less personal relationships between doctor and patient. Also, it would be an illusion to assume that such delivery systems are more economical to operate.

Dr. Hayward's monograph does serve a need in presenting an outline of the problems and since the changes he is suggesting are actively being discussed by professional and consumer groups, it would be well for the professionals to become familiar with the material presented. The reader should be aware, of course, that Dr. Hayward is an advocate and the discussion is therefore biased in favor of the concepts presented with no discussion of the possible disadvantages to a mechanized assemblyline approach.

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ABSTRACTS

Bernstein, L., Dental occlusion and early repair of alveolar clefts. *Arch. Otolaryng., 96,* 395–399, 1972.

Patients in a series of 45 complete clefts of the lip and palate had the lip and alveolar clefts repaired in infancy. These were compared with a control series of 263 similar clefts in which only the cleft of the lip was repaired in infancy. Both groups had the palatal clefts repaired at a mean age of 3 years and 1 month. Articulated dental casts, obtained from both groups at a mean age of 7 years, were studied to observe the articulation of the posterior dental segments. The study showed a small increase in posterior crossbite malocclusion and a notably high incidence of collapse of the posterior dental arch in the group that had the alveolar cleft repaired at the time of the cleft lip repair. The conclusion of this report is against early surgery on the alveolar cleft. (Author's summary: Gregg)

Chalian, V. A. & Barnett, M. O., A technique for constructing one-piece hollow obturator. *J. Prosthetic Dent., 28,* 448–453, 1972.

A technique is described for construction of a light weight maxillary obturator following a maxillary resection. Since the weight of an obturator can be a factor in dislodging, it should be as light as possible, easy to clean and have enough thickness to allow for adjustment if necessary. (Goldenberg)

Cosman, B., & Crikelair, G. F., Mandibular hypoplasia and the late development of glossopharyngeal airway obstruction. *Plast. reconstr. Surg., 50,* 573–579, 1972.

Patients with severe mandibular hypoplasia of diverse cause late in childhood may develop a syndrome similar to that seen in the Pierre Robin neonate consisting of nocturnal airway obstruction. Three cases are presented in which mandibular division and forward motion by means of interplated bone grafts cured this syndrome. The fact that one of these three patients had little tongue tissue having a partial congenital aglossia suggests strongly that hyoid complex retrodisplacement rather than tongue malposition is fundamental to the development of this syndrome. (Cosman)

Frederiks, Edith, Vascular patterns in normal and cleft primary and secondary palate in human embryos. *Brit. J. Plast. Surg., 25,* 207–233, 1972.

This article discusses research performed on the vascular patterns in normal and cleft primary and secondary palate in human embryos. The author concludes that, from the vascular patterns found, hematogenic factors or a general oxygen supply deficiency may have an adverse effect on the development of the primary and secondary palate in human embryos. (Lass)

Goldberg, M. F., Hsia, D. Y., Cotlier, E., Opitz, J. M., & Cross, H. E., Symposium: genetics applied to ophthalmology. *Trans. Amer. Acad. Ophthalmol. & Otolaryng., 76,* 1137–1213, 1972.

This is a series of five papers presented as a symposium at the 76th Annual Meeting of the American Academy of Ophthalmology and Otolaryngology in September 1971, including: "An Introduction to Basic Genetic Principles Applied to Ophthalmology" by Goldberg, "The Use of In Vitro Techniques in Ophthalmic Genetics," by Hsia, "Biochemical Detection of Inborn Errors of Metabolism Affecting the Eye" by Cotlier, "Ocular Anomalies In Malformation Syndromes" by Opitz, and "Genetic Counseling" by Cross. Facial clefting, per se, was not discussed in any

of the papers, although references were made to syndromes and conditions in which these appeared along with ocular abnormalities. Very extensive bibliographical references accompany the papers. (Gregg)

Harding, R. L., & Mazaheri, M., Growth and spatial changes in the arch form in bilateral cleft lip and palate patients. *Plast. reconstr. Surg., 50,* 591–599, 1972.

Longitudinal studies in 80 children with bilateral cleft of the lip are reported and compared with 80 unilateral cleft lip and palate patients and a normal group. In general, prior to surgical intervention, anterior posterior dimensions and maxillary width dimensions were greater in the patients with bilateral clefts than those with the unilateral clefts or normals. The width of the palate in the tuberosity and cuspid regions were generally greater in the bilateral clefts than in the unilateral clefts. Following lip repair there was a narrowing of the palatal cleft in both groups. Maxillary length, however, continued to be greater in the bilateral cleft lip and palate group in all ages studied. There appeared to be a temporary growth lag following even the most minor surgery on the palate (e.g. vomer flap). There was no persistent growth disturbance so the surgical insult did not have an irreversible effect on growth or on dental alveolar adaptation. There was a variable but continual improvement in the relationship of premaxilla and lateral segments during the various stages of arch development. (Cosman)

Jolleys, A., & Robertson, N. R. E., A study of the effects of early bone-grafting in complete clefts of the lip and palate—a five year study. *Brit. J. Plast. Surg., 25,* 229–237, 1972.

The authors describe an investigation concerned with the effect of bone grafting at the age of 15 months in infants with complete clefts of the lip and palate. Results of the study indicate that there is no clear advantageous effect resulting from early bone grafting. In addition, early bone grafting resulted in limited growth in the upper jaws, which was manifested by reduced antero-posterior development, a reduced upper jaw area, and an increased incidence of crossbite. (Lass)

Moore, D. J., Glossectomy rehabilitation by mandibular tongue prosthesis. *J. Prosthetic Dent., 28,* 429–437, 1972.

When patients are subjected to total removal of the tongue, tremendous psychological problems arise due to inability to speak and swallow food. A combination of acrylic and silicone rubber is used here to form an artificial tongue and attached to a mandibular denture. This case report describes the technique employed and the help given the patient. (Goldenberg)

Neill, C. A., Genetic factors in congenital heart disease. *Hospital Practice, 7,* 97–102, 1972.

This is a didactic paper concerning inherited syndromes involving many organ systems and in which the heart is also involved, beamed primarily toward the general practitioner of medicine. Cleft lip and palate are mentioned only in passing. (Gregg)

Rosenthal, A. R., Ryan, S. J., Jr., & Horowitz, P., Ocular manifestations of dwarfism. *Trans. Amer. Acad. Ophthal. Otolaryng., 76,* 1500–1518, 1972.

This is a rather lengthy article, the publication of a paper presented at the 76th Annual Meeting of the American Academy of Ophthalmology and Otolaryngology, in which the various syndromes which include ocular abnormalities and dwarfism are discussed. Congenital facial clefting is mentioned only in passing, without discussion. A lengthy bibliography accompanies the paper. (Gregg)

Sessions, D. G. & Stallings, J. O., First and second branchial syndrome. *Arch. Otolaryng., 96,* 579–583, 1972.

The authors have presented a single case and a discussion of the pathogenesis, treatment, and management of this syndrome. The case reported had a partial palatal cleft. They concluded, "The first and second branchial syndrome refers to patients with unilateral macrostomia, hemignathia, severe ear deformity, and hypoplasia of the midfacial and temporal bones. These deformities may have a devastating effect on both the patient and the family, and early correction is advisable. The macrostomia should be corrected soon after birth. The hemifacial abnormality can be readily reconstructed with an autogenous dermis-fat implant. Ear reconstruction should be delayed until the patient is mature enough to understand the importance of protecting the reconstructed ear." (Gregg)

Severeid, L. R., A longitudinal study of the efficacy of adenoidectomy in children with cleft palate and secretory otitis media. *Trans. Amer. Acad. Ophthalmol. & Otolaryng., 76,* 1319–1324, 1972.

A review of the records of 191 patients who had cleft palates and who had been followed since infancy showed that 31 (16%) never had secretory otitis media and of the 160 subjects who had secretory otitis media, the disorder had resolved in 88 (55%). Secretory otitis media decreased in incidence progressively with age. Eighty-three patients had adenoidectomy in treatment of serous otitis media and of these patients, 38% (32) still had secretory otitis media. Forty (52%) of the patients who did not have adenoidectomy still had secretory otitis media. When the patients were evaluated according to age groups there was no difference in the incidence

of secretory otitis media between the group that had undergone adenoidectomy and the group that had not. (Gregg)

Sharma, R. K., Collipp, P. J., Thomas, J. T., & Maddaiah, V. T., Abnormal glucose metabolism in diastropic dwarfism. *J. Amer. Med. Assoc., 222,* 1175–1177, 1972.

The authors have presented the findings of a case study of a diastrophic dwarf. There were scoliosis and lordosis of the spine, clubbed feet, cleft palate, dysplastic hips, and flexion contractures of the knees and short extremities. Biochemical abnormalities found in the patient included high cholesterol level, abnormal glucose tolerance, low growth hormone level, and abnormal excretion of xanthurenic and kynurenic acids following tryptophan loading. This anomaly is not associated with mental retardation and is probably inherited as an autosomal recessive process. It must be differentiated from achondroplasia which is autosomal dominant. However, the findings here indicate that achondroplasia and diastrophic dwarfism, two different kinds of osteochondrodystrophies, may have similar basic biochemical defects. (Gregg)

Weiss, C. E., The significance of Passavant's pad in post-obturator patients. *Folia Phoniatrica, 24,* 51–56, 1972.

The author discusses the importance of Passavant's pad in the post-obturator patients seen at the University of Oregon Medical School. He concludes that Passavant's pad appears to contribute to adequate velopharyngeal closure and believes that its presence should be ascertained in patients who are being considered for an obturator. Furthermore, he feels that the presence of Passavant's pad should be taken into account when constructing an obturator. (Lass)

Wilson, Margaret E. A. C., A ten-year survey of cleft lip and cleft palate in the South West region. *Brit. J. Plast. Surg., 25,* 224–228, 1972.

The author discusses the results of a survey employed to determine the incidence of clefts of the lip and palate in the South West region of England. The survey included information obtained from case histories and questionnaires. The results of the survey include the following information: incidence, sex, associated congenital abnormalities, age of mother and previous pregnancies, mother's condition during early pregnancy, family history of clefts, birth weight, incidence of twins, illegitimacy, and deaths. (Lass)

ANNOUNCEMENTS

Second International Congress on Cleft Palate
Copenhagen, 26–31 August, 1973

The congress is planned and organized jointly by the Scandinavian Association of Plastic Surgeons, the Scandinavian Orthodontic Society, and the Scandinavian Collaboration Board for Speech Pathology, and will be held in "Falkoner Centret", a modern congress centre and hotel in Copenhagen. The official language of the congress will be English. A preliminary program is being distributed to colleagues of various disciplines in many countries. A series of tentative scientific program topics within research as well as treatment is listed, including a session on the present management of severe craniofacial anomalies with an eye to the future. The scientific program will be presented as panel discussions, free communications, small group workshops (colloquium session), films, and exhibits—with emphasis on interdisciplinary topics.

Those who have not received a first announcement program with preliminary application form, please contact the Congress Secretariat: DIS Congress Service, 36 Skindergade, DK-1159 Copenhagen K, Denmark, or The General Secretary of the Congress, Dr. P. Fogh-Andersen, Diakonissestiftelsens Hospital, DK-2000 Copenhagen F, Denmark.

A Call for Participation

President-Elect Hugh Morris seeks volunteers for committee work for ACPA 1973–74 activities. If you have not been "active", and if you would like to be, send Dr. Morris a note about your interests. Name specific committees if you have a preference. Send replies to: Hughlett Morris, Ph.D. Department of Otolaryngology and Maxillofacial Surgery, University Hospitals, Iowa City, Iowa 52240

ANNUAL MEETING

THE AMERICAN CLEFT PALATE ASSOCIATION

May 10–11, 1973

Skirvin Hotel

Oklahoma City, Oklahoma