BOOK REVIEWS

Betty J. McWilliams, Ph.D., Editor

BARDACH, JANUSZ, *Rozszczepy wargi gornej i podniebienia, (Cleft Lip and Cleft Palate)*. Warszawa: Panstwowy Zaklad Wydawnictw Lekarskich, 1967. Pp. 347. Price not indicated.

This monograph discusses in detail the etiology, pathology, and incidence of cleft lip and palate. The book also presents a system of organizing the medical caré for children afflicted by these congenital abnormalities. It emphasizes the necessity of close cooperation among the obstetrician, neonatal pediatrician, general pediatrician, laryngologist, oral surgeon, and orthodontist. Frequently, the help of a psychologist or even a psychiatrist is also needed. Such medical care, the author feels, is best carried out by a specialized institute. Registration in such institutes of all newborns and children with these congenital abnormalities is also advocated.

The book further presents up-to-date achievements in the world's medicine on the subject of cleft palate and cleft lip. Also, the original methods of treatment used at the Institute for Congenital Abnormalities of the Face of the Department of Orofacial Surgery of Akademia Medyczna in Lodz, Poland, and based upon a large number of cases are presented.

The book is very well illustrated with many black and white and color photographs of the patients treated and operated in the institute and with multiple schematic drawings of operative procedures.

This work is especially addressed to oral surgeons, plastic surgeons, pediatric surgeons, laryngologists, orthodontists, and pediatricians.

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DIEHL, CHARLES F., *Introduction to the Anatomy and Physiology of the Speech Mechanism*. Springfield, Illinois: Charles C Thomas, 1968. Pp. 172. $7.00.

Introduction to the Anatomy and Physiology of the Speech Mechanism by Charles F. Diehl is meant to introduce the student to the "basic fundamental aspects of the highly complicated speech mechanism". Approximately one half of the text deals with the nervous system, the other half covers the muscular bases of respiration, phonation, resonation, and articulation. The purpose of the book is commendable, and, if the first page can be overlooked, where the author takes education and educators to task, the level set by the first two or three chapters seems appropriate to the stated purpose. Unfortunately, the level of the

text is extremely inconsistent, at one point discussing the cellular structure of the neuron, and at another omitting any detail of the skeleton including the costovertebral articulations. In addition, numerous terms such as chromatin, eccentric growth, and RNA are used without definition. Other terms, such as neurofibrils, unipolar, bipolar, and spinal ganglia, are defined several pages after their initial use.

However, the principal criticism of the book could be that many of the basic assumptions in the text are at odds with what is generally accepted today. Some examples are as follows. The theories of Delacato are used as the basis for the entire chapter on the neurophysiology of speech. Vocal fold action is explained on the basis of muscle fibers inserting into the vocal ligament so that "any part of the glottis can be closed or opened without necessarily relating to any other part". This is contradictory to experimental evidence from such work as Sonnesson's, which is not mentioned. The sternum, clavicle, and rib cage are presented as potential voice resonators. "Passavant's cushion" is presented in the context of the normal function, an assumption contrary to most, if not all, recent experimentation.

In a discussion of the function of the cerebral cortex, reference is made to the usual characterization of men from Mars in science fiction, where writers envision "a man from Mars as being far ahead of Earth man in all forms of mental development. Thus, having used the forebrain more, he will therefore possess much larger hemispheres". This could easily be interpreted as a Lamarkian explanation of evolution.

In the description of the function of the cochlea, the organ of corti is largely dismissed, and the one theory of hearing presented is that postulated by von Helmholtz in 1875.

In addition to the above, there are many inaccuracies in the book. Cranial nerve ten is described as innervating the larynx, rather than cranial nerve eleven which travels with ten. In a discussion of internal respiration, the following comment is made: "The oxygen in the tissue cells combines with other substances repeatedly broken down into simpler oxygen absorbing elements until only carbon dioxide and water remain in the tissues". This may have been an error in printing, but the author's point is at least obscure.

One of the passive factors of exhalation is given as, "The ribs having been stretched, will recoil". At first the reader might feel that reference is being made to the torque placed on the costal cartilages during respiration, but this action is listed next as another factor. The function of the levator ani muscle is described as "pushing the viscera up, thus assisting in inspiration". Even if this muscle were to be considered to have the function described, which is novel, by the description given, its function would be expiratory rather than inspiratory.

There are many other errors of fact, as well as subscription to theoretical concepts which do not take into account much of the literature in

this area over the past ten or twenty years. Even the glossary contains many errors of pronunciation.

In summary, this text 1) fails to stay at a level consistent with its stated purpose, 2) subscribes largely to theories of function which have been rejected by most modern investigators, 3) is written in a manner which would lead a student to false conclusions based on over-generalization of unfortunate juxtaposition of ideas, 4) contains many errors of fact, and 5) omits much information which is so basic that proper understanding of the relationship between structure and function is not possible.

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MEYER, PAUL, *Headgear Orthodontics*. New Jersey: Meyer Publishing Company, 1968. Pp. 560. $40.00.

Is this a book? A compilation? A review of literature? I confess that I have never seen anything quite like this offset publication.

The subject that Dr. Paul Meyer attempts to communicate is relative to an orthodontic appliance called "Head-gear", "Head-cap", "extra-oral force". The method of communication of Dr. Paul Meyer is by photographs with minimal text. In the introduction he states, "The entire work should revolve around the photographs, drawings and prints.... The explanatory notes should be glorified captions".

This confession describes adequately this compilation. It gives the impression that Dr. Meyer had opened a folder with the title "Head-gear"; and when he found anything related to that subject, he made photocopies of the illustrations and the captions. His sources come from 19th century books as well as copies of manufacturers' pamphlets with addresses and prices.

Then apparently, one day, he thought—why not publish the contents of such a folder, to share with others the fruits of this effort. This he has done by an alphabetic listing of authors. Thus, fig. 1 on p. 1 represents a head-cap of Adams and fig. 715 on p. 430 a chin-cap by Westbrook.

The second part starts on p. 431 where a number of topics listed alphabetically are treated in 75 pages.

This is followed by an additional 42 pages of head-cap advertisements. At the end, there is a list of authors and an index of subjects covered.

This compilation of 8½″ × 11″ offset reproductions is so unusual that

I will advise the prospective buyer to borrow it for a week of examination before purchasing it.

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THOMAS, JAMES B., *Introduction to Human Embryology*. Philadelphia: Lea & Febiger, 1968. Pp. 348. $12.50.

J. B. Thomas' *Introduction to Human Embryology* is a very unusual text on embryology as it combines the classical anatomical knowledge with numerous data on maternal physiology which are generally found in books on obstetrics. To make this combination more unusual, a chapter on the "Psychological impact of pregnancy on the family" written by A. J. Enelow has also been included in the text.

The reason for this approach is clearly expressed by the author in his preface: "The embryology presented along the way may at times seem superficial to the embryologist and the maternal physiology touched on may seem less than sophisticated to the obstetrician, but to the human biologist not schooled in both these disciplines, and particularly to the young student who is just beginning to inspect the broad fabric of man, I hope this presentation will be both informative and exciting".

The description of developmental events has been clearly and accurately made. However, this description is unfortunately accompanied by poor illustrations; figures are few and some of them are not adequate from the technical point of view (Figures 10-1 and 11-3 are, for example, evidently out of proportion and inaccurate). A thorough understanding of developmental changes is generally difficult for beginning students and it becomes almost impossible if adequate illustration does not accompany the description of the processes under study. On this basis, we believe that this book is not to be recommended as the sole text for students beginning embryological studies. However, it remains as a very valuable book for students or physicians needing an integrated and comprehensive review.

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ABSTRACTS

Barber, T. K., The handicapped adolescent. *Dent. Clinics North Amer., 13,* 313–327, 1969.

An overview discussion regarding management of adolescent patients with various handicaps, cleft palate being one type. Suggestions for proper dental management of specific problems are presented. (Swoope)

Francesconi, G., and G. Fortunato, Medical dysraphia of the face. *Plastic reconstr. Surg., 43,* 481–491, 1969.

12 cases of disparate facial anomalies are presented in which a midline fusion defect—"dysraphia"—serves to explain at least a portion of the deformities presented. Hereditary influence was demonstrated by long term follow up in at least 1 family with bifid nose. (Cosman)

Frommer, J., and C. W. Monroe, Further evidence for the absence of elastic fibers during movement of the palatal shelves in mice. *J. dent. Res., 48,* 155, 1969.

Tension from an elastic fiber network has been postulated in the past as a mechanism to provide a force to move the palatine shelves from a vertical to a horizontal position. Fetal rats were obtained on insemination days 14, 15, and 16. Elastic tissue staining techniques failed to demonstrate these fibers in the palatal shelf areas. (Swoope)

Goljan, K. R., Induction of cleft palate by means of internal radiation. *J. dent. Res., 47,* 500, 1968.

An experimental model has been developed by internal radiation induction of cleft palate. The internal radiation was from thymidine, radiolabeled with tritium. Cleft palates were regularly produced in 14–82% of the offspring of treated A/JAX mice. Presumably the DNA structure of chromatin material was specifically affected by internal radiation. (Swoope)

Gorlin, R. J., Syndromes associated with facial clefting, *J. dent. Res., 47,* 935, 1968.

Descriptions of two syndromes associated with facial clefts are presented. Popliteal Pterygium Syndrome—a dominant trait involving pterygia (skin folds), cleft lip and palate, congenital lip pits, eyelid adhesions, and digital anomalies. Orofacial-Digital Syndrome—there are pseudoclefts of the upper lip and hyperplastic frena across the hard palate, mucobuccal fold, and tongue. Various digital anomalies are present. Other syndromes are listed, but not described. (Swoope)

Hellstrom, B., Society and the handicapped child in Sweden. *J. Amer. med. Women's Assoc., 24,* 229–232, 1969.

Obligatory health insurance has been in force in Sweden since 1955. This provides for payments to employees on sick leave, free hospital care, free choice of physician. Almost all hospitals are run by state or local governments. All cases of congenital malformations are reported to a central registry and the statistics are collated monthly. There is a mass screening of all new-born. Studies show incidence of physically and psychically handicapped children to be about 1.5%. Handicapped children who require specialized treatment in hospitals are sent to those institutions nearest their homes and near schools so that patients can receive some of their education in normal surroundings. For blind children there is a school in Stockholm that serves the entire country, and provides complete schooling plus occupational training. Parents of these children also receive a course to better cope with the problem. However, there are serious shortages in facilities for vocational training of children and adolescents with handicaps. Public assistance in the form of an invalid housing allowance and social benefits are of some help. Recently, a drive was started to expand all facilities for handicapped children so that those who can work can lead meaningful lives. (Goldenberg)

Kremenak, C. R., D. F. Hartshorn, and S. E. Demjen, The role of the cartilagenous nasal septum in maxillofacial growth: experimental septum removal in beagle pups. *J. dent. Res.* (IADR Abstracts), p. 48, 1969.

The cartilagenous nasal septum was removed in 6 beagle pups (26 days) without disturbing the vomer or turbinates. A sham removal operation was performed on six additional pups. Four month findings show the experimental group with decreased head and snout length, anterior open bite, and other cranial changes. The septum may play more than a passive role in midfacial growth. (Swoope)

Lang, B. R., and L. J. Kipfmueller, Treating velopharyngeal inadequacy with the palatal lift concept. *Plastic reconstr. Surg., 43,* 467–477, 1969.

A distinction should be drawn between velopharyngeal inadequacy as a result of functional incompetency of the tissues present and actual insufficiency of the appropriate tissues. Both situations have been treated by pharyngeal flaps, by silicone implants, and by prostheses. In using the latter in the forms of conventional

strap and bulb cleft palate prostheses, in cases of velopharyngeal incompetency, the relatively normal length of the soft palate presents problems with the obturator requiring the strap portion to be placed low to circumvent the soft palate. The authors point out that in cases of incompetency it is not necessary to obturate, rather the lumen of the velopharyngeal valve can be decreased by palatal lift. Even in cases of incompetency, the lift concept is useful and a lift prosthesis can be used to reduce the size of the bulb prosthesis attached to it. 15 patients were treated with such lift prostheses—6 incompetency patients with lift alone, and 9 insufficiency patients with lift and bulb prosthesis. All the patients had been using their prostheses for periods of 4 months to 12 years at the time of testing. They were compared with a normal group of 21 subjects using cephalograms and speech analysis to evaluate soft palate length, nasopharyngeal depth, height of closure, and residual lumen with and without the prosthesis in place. In all instances speech was improved with the prosthesis although the most dramatic improvement tended to be in the poorest speakers. The concept of palatal lift seemed to be of significance and the use of the appliances seemed of additional value in some instances in the development of muscle control prior to eventual surgical modification of the palatal pharyngeal valve. (Cosman)

Lowe, R. D., A mirror system for photographic slide presentations. *J. prosth. Dent., 21,* 650–653, 1969.

An effective method for photography of models and appliances is presented. Two front surface mirrors are used to project various surfaces. A single photograph is able to document multiple views of the subject. (Swoope)

Lowry, R. B., J. R. Miller, and J. R. MacLean, Micrognathia, polydactyly, and cleft palate. *J. Pediatr., 72,* 859–861, 1968.

The authors describe the Ullrich-Feichtiger syndrome and the Smith-Lemli-Opitz syndrome. The present article is a case report of a female infant whose clinical features resemble the Ullrich-Feichtiger syndrome, but in whom the dermatoglyphic findings and some of the clinical features resemble the Smith-Lemli-Opitz syndrome. The infant, who died at 40 days, showed the following: severe micrognathia, cleft of the soft palate, broad upper alveolar ridge, bilateral ranulae of sublingual salivary glands, small anterior fontanelle, bilateral ptosis, polydactyl of each hand, and partial syndactyly of the second and third toes of each foot. Chromosome karyotype was that of a normal female. The authors suggest that the Ullrich-Feichtiger syndrome and the Smith-Lemli-Opitz syndrome represent variants of the same syndrome. (Noll)

McNulty, E. C., C. S. C. Lear, and C. F. Moorrees, Variability in lip adaptation to changes in incisor position. *J. dent. Res., 47,* 537–547, 1968.

A method of measuring forces exerted on the maxillary incisor teeth by the lip is described, using a force-sensing device within the confines of a denture tooth. The tooth position was varied, in terms of protrusion. Oral activities of mastication, deglutition, speech, and "rest" were tested in five subjects. Protrusion of the teeth resulted in increased lip forces. Some of the subjects showed lip forces returning to original levels within a week, while others did not exhibit this muscle accommodation. (Swoope)

Mazaheri, M., and P. P. Sahni, Techniques of cephalometry, photography, and oral impressions for infants. *J. prosth. Dent., 21,* 315–323, 1969.

Obtaining adequate records for proper diagnosis and treatment planning presents

great difficulty when the patient is an infant. The authors present a systematic approach using adequate premedication. Facial and oral impressions are obtained. (Swoope)

Pruzansky, S., H. Aduss, and S. Berkowitz, The frequency and cause of arch collapse in unilateral cleft lip and palate. *J. dent. Res.* (IADR Abstracts), p. 50, 1969.

Longitudinal records were obtained on 106 patients. A low incidence of arch collapse was observed. Conclusions reported were that collapse is not an inevitable sequel to cleft lip and palate repair, and premaxillary orthopedics and bone-grafting were not necessary for control of arch form. (Swoope)

Quigley, L. F., Jr., C. M. Cobb, and K. Vargervik, Nasality ratings and airflow measures during speech. *Plastic reconstr. Surg., 43,* 292–299, 1969.

An attempt was made to determine the relationship between objectively determined airflow during speech and subjectively judged nasality. 37 cleft palate children and 14 of their normal siblings were the main subjects of the study but 42 other cleft palate patients had airflow studies alone. Airflow was measured with a hot wire anemometer and 3 types of mask—nasal, facial, and oral. For a given subject the findings were reproducible whatever the mask. Hunter and Chase manometers and wet spirometer methods were used to measure air pressure produced. 11 judges, 3 trained and 8 untrained, made the subjective nasality assessment. Judged nasality correlated significantly with nasal airflow in only a few of the test phrases and sounds. Nasality was fairly well correlated with the nasal airflow which occurred during pressure testing. It was interesting that in the cleft palate patients, however, oral pressures were accompanied by high nasal airflow but there was no correlation between oral pressure and nasal leakage in individual cases thus throwing some doubt on the usefulness of previous testing techniques. No significant correlation was found at any time between judged nasality and the results of any pressure tests made during simultaneous measurement of nasal airflow and oral pressure. (Cosman)

Taylor, M. A., Sex ratios of newborns: associated with prepartum and postpartum schizophrenia. *Science, 164,* 723–724, 1969.

From a review of records of schizophrenic women whose psychotic symptoms were associated with pregnancy, it was found that those who developed a psychosis within one month of conception delivered only live female infants. A predominance of males was born to thirteen women who became psychotic during first month after delivery. These observations are interpreted as consistent with a theory that schizophrenia is associated with plasma factors which interact with the fetus and provide the basis for a higher fetal mortality. Report is made to indicate the male embryo and fetus are affected by the sudden development of the mother's prepartum schizophrenia. Absence of male live births when conception and psychotic onset coincide, and the predominance of birth defects in males suggests that when the mother becomes psychotic within one month of conception, the male embryo is destroyed, resulting in either a missed or overt spontaneous abortion. When the mother becomes psychotic during the second or third month of pregnancy, the male fetus either develops abnormally or dies slowly. Twenty-six pregnancies were studied where the mother became psychotic during the first month after delivery. Twenty-two males and four females were delivered. The data suggest a causal relation between the birth of a male child and postpartum schizophrenia. (Goldenberg)

ANNOUNCEMENTS

Newly elected officers of the American Academy of Maxillofacial Prosthesis are: President, Herbert H. Metz, D.D.S.; President-elect, Morton S. Rosen, D.D.S.; Vice-president, John E. Robinson, Jr., D.D.S.; Executive Secretary, William R. Laney, D.M.D.; Treasurer, Augustus J. Valauri, D.D.S; and Editor, I. Kenneth Adisman, D.D.S. The 1969 annual meeting of the Academy will be in New York City, October 8 and 9.

Graduate Traineeships in Cleft Palate Therapy and Rehabilitation, supported by the United States Public Health Service, are available to qualified applicants. Clinical training is offered at the Lancaster Cleft Palate Clinic, Lancaster, Pennsylvania. Graduate work in a basic science in connection with the clinical training is encouraged. The annual stipend is $6,000.00 with annual increments and dependency allowances, and is tax-free. Address all inquiries to: Chairman, Committee on Traineeships and Fellowships, University of Pennsylvania, School of Dental Medicine, 4001 Spruce Street, Philadelphia, Pennsylvania 19104.

A new interdisciplinary group clinic dedicated to the diagnosis and treatment of oral, facial, and communicative disorders has been established at St. Mary's Hospital in Grand Rapids, Michigan. The members of the team are as follows: William G. Yost, M.D., Plastic Surgery and Chairman; William D. Simpson, M.D., Plastic Surgeon; A. E. Siegel, M.D., Pediatrics; R. M. Westover, D.D.S., Orthodontia; John Cook, D.D.S., Dentist; J. C. Ringenberg, M.D., Otolaryngology; Robert Hoek, D.D.S, Oral Surgery; Mr. Jack Waltz, Speech Therapist; Mr. Joseph Blanton, Audiologist; Miss Alice Peterson, Medical Social Worker.

The Mayo Graduate School of Medicine and the Section of Dentistry and Oral Surgery of the Mayo Clinic offer a graduate-residency training program in prosthodontics leading to a Master of Science Degree in Dentistry or Certificate of Achievement. Appointments are made in December for the 36 month course of study in conventional and maxillofacial prosthodontics which begins with the following summer or fall quarter. Didactic courses, clinical and laboratory experience, and practice teaching satisfy requirements for certification by the American Board of Prosthodontics. A stipend is provided with annual increments. Address inquiries to Director, Mayo Graduate School of Medicine, 200 First Street Southwest, Rochester, Minnesota 55902.

Recently, a Cleft Palate Bibliography Service was initiated as one of the services offered by ACPA. All ACPA members receive the bibliography, to be published quarterly, at no cost. Nonmembers can subscribe to the service by writing to Dr. Nicholas G. Georgiade, Department of Surgery, Duke University, Durham, North Carolina 27706. The fee is 50¢ per copy; a yearly subscription is $2.08.

A five day Symposium on Cleft Palate and other Cranio-facial Anomalies will be given at the Carillon Hotel in Miami Beach, Florida, March 9th–13th, 1970. The program is being sponsored by the Birth Defects Center, University of Miami School of Medicine; Center for Craniofacial Anomalies, University of Illinois at the Medical Center, Chicago, Illinois; and the National Foundation-March of Dimes Dade County Chapter. The program will cover the anatomy of clefts, epidemiology, genetics, syndromes and clefts, pre and post natal development, surgical reconstruction, psychosocial end points, congenital palatopharyngeal incompetence, as well as other cranio-facial anomalies. Orthodontic-prosthetic management of the cleft palate patient will be covered in detail. The fee is $100. For more information write to: Samuel Berkowitz, D.D.S., M.S., Assistant Clinical Professor of Pediatrics, 6601 S.W. 80th Street, South Miami, Florida 33143.

NOTICE: The page charge policy, instituted with the January 1969 *CPJ*, will not be assessed for the publication of Congress papers since the publication of Congress papers has been underwritten by the NIDR grant. If, however, the Congress paper is lengthened for publication, there may be page charges for the added pages.

TIME AND PLACE, ACPA

1970—April 16, 17, 18 ..... Portland at the Hilton
1971—April 22, 23, 24 ..... Pittsburgh at Chatham Center
1972—May 18, 19, 20 ..... Salt Lake City at the Utah
1973—date unspecified ..... Oklahoma City
1974—date unspecified ..... Boston

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