BOOK REVIEWS

CARRELL, JAMES A., *Disorders of Articulation.* Englewood Cliffs, New Jersey: Prentice Hall, 1968.

This book will disappoint the cookbook-oriented clinician. To Carrell, articulation is "a total response of the organism" and the treatment of disordered articulation must follow an understanding of its nature and etiology and its unique occurrence in the individual. In *Disorders of Articulation,* Carrell pursues this point of view as he concentrates on the "phenomena of defective articulation, the factors which may disrupt the normal articulation process, and those theoretical considerations which underlie successful clinical procedures".

The etiological correlates of defective articulation comprise the heart of the book and, apparently, are close to Carrell's heart as well. Thoroughly and comprehensively, the author ranges over a broad spectrum of conditions and disturbances likely to produce defective articulation. Here and there he discloses little-known and unusual pathologies, the Gilles de la Tourette of the psychotic child, or the Pierre-Robin syndrome, an orofacial anomaly. Types of dysarthrias are differentiated in a chapter on neurogenic disorders of articulation. Sections on "Functional Factors" discuss environmental influences, psychodynamic factors, intellectual impairment, and perceptual deficits. A chapter on "Morphologic Factors" treats cleft lip and palate, dental malocclusions, and orofacial defects. Unquestionably, Carrell's discussion of the etiology of articulation disorders is the book's major strength.

Less satisfactory is Carrell's concluding chapter on diagnosis and training. The treatment is all too brief and the principles and methods presented, though generally sound and well-established, tend to be dated and tradition-bound. In this section and throughout the text, one would welcome greater discussion of what is not known, what remains controversial, and of the contributions of recent research. But as another mini-text in Prentice-Hall's Speech Pathology Series, this book is designed to provide only a core of basic information. Well aware that certain areas are not covered in depth, Carrell has provided a 353-item bibliography to which the reader is frequently referred.

With *Disorders of Articulation* Carrell has given us a rational and stimulating introduction to the most prevalent of all speech disorders.

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ELDRIDGE, MARGARET, *A History of the Treatment of Speech Disorders.* Edinburgh and London: E. and S. Livingstone, Ltd., 1968. Pp. 232. $6.75. (The Williams & Wilkins Co., Baltimore, exclusive U. S. agents.)

A publisher's note at the beginning of this book reads as follows: "The publishers greatly regret the death of Mrs. Eldridge before the publication of her book and are much indebted to Dr. Muriel E. Morley for her work on the proofs and the index. They and Dr. Morley apologize for any inaccuracies which may appear in the text as a result of lack of access to Mrs. Eldridge's original sources and would welcome advice on their correction for future editions".

This reader found some minor inaccuracies in the book; but these are of little significance, and certainly do not interfere with what the author—and later Dr. Morley—intended to say. The scope of the historical material covered is world-wide, and goes back to the pre-Renaissance period. Collection of this material was an enormous undertaking, and the author did an outstanding job of amassing so many details about so many places and events. At the same time as she presented a great many details of the development of the profession, she did not lose the historical and philosophical perspective which makes this book pleasant as well as informative reading.

The book begins with the pre-Renaissance period, and discusses early attitudes toward handicapped persons and methods of treating, or not treating, them. In fact, some of the most delightful reading is to be found in Part I, which covers the period from pre-Renaissance into the twentieth century. An example follows: "So science trod remorselessly upon the heels of superstition, ever a nimble side-stepper, dodged this way and that seeking, and often finding, supernatural explanations for unusual phenomena. But science is as patient as she is implacable".

There are interesting descriptions of some of the highly imaginative methods used to treat communication disorders, such as "the tongue should be rubbed with lazerwort, and he should chew pungent substances such as mustard, garlic, onions, and make every effort to articulate. He must exercise himself to retain his breath, wash his head with cold water, and then vomit". (Celsus, 1938)

The last section of Part I covers the period from 1900 to 1913. In this section the author traces the beginnings of treatment of disorders of speech in Denmark, Germany, England, the United States, Austria, and Holland. The author apparently singles out this period in the twentieth century because there were many significant developments taking shape just prior to World War I. In this she speaks of the contributions of such men as Wyllie, Halle, Gutzmann, Sr., and his son, Gutzmann the Younger, Kussmaul, Bluemel, Fletcher, Coriot, Scripture and his wife, Twitmayer Blanton, Froeschels, and a number of others not so well-known. These

pioneers were concerned primarily with the problem of stuttering, or stammering, as it is used in this book, and to some extent with aphasia and voice disorders.

There was considerable concern with the deaf and aphasic during this period also. The contributions of individuals include many familiar names, such as David Hirsch, Alexander Graham Bell, Abbé De L'Epee, Pierre Paul Broca, Carl Wernicke, Henry Head, and Hughlings Jackson.

The author then traces the development of the profession in every major country in which there was any activity up to 1966. Part II, entitled "A Profession Takes Shape", covers the period from 1914 to 1945. Part III, entitled "Journey", covers the period 1946 to 1966. It is interesting to note the strong influence of medical people on the development of the profession in every country except the United States, and Canada to some extent. In most countries what is called "speech therapy" still is largely under the control of physicians. The author points out that only now in England is there a strong trend towards "raising the status of speech therapy to that of an independent profession: independent of the professions of medicine and education which fostered its early years". The book also reveals the wide variety in qualifications, functions, and settings for work with communication disorders, as well as some major differences in point of view, and considerable difference in terminology.

In the last section of the book, "A Review of Present Trends", the author summarizes what appear to be current trends in most of the countries of the world today. So many of these are mentioned that there would be no point in discussing them here, but these few pages alone are well worth the price of this most insightful, interesting, and comprehensive book.

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VERNON, DAVID T. A., JEANNE M. FOLEY, RAYMOND R. SIPOWICZ, and JEROME L. SCHULMAN, *The Psychological Responses of Children to Hospitalization and Illness*. Springfield, Illinois: Charles C Thomas, 1965. Pp. 192. $8.00.

This volume is erudite, well balanced, and unprejudiced. It satisfies a need in terms of bringing together a great mass of information of special interest to individuals concerned with the hospitalization of children and of particular value for reference and teaching. Subjectively, this reviewer found the book to be a bit lacking in sophistication. On the other hand, the goal of the book was to provide a reference and was not intended to go beyond that level. With this in mind, this book can be recommended

as a worthwhile addition to professional libraries and as a summary of work accomplished in this area of interest to the date of publication.

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ABSTRACTS

Angelici, D., and M. Portois, The role of acid phosphatase in the fusion of the secondary palate. *J. embryol. exp. Morph., 20,* 15–23, 1968.

Fusion of the secondary palate is accomplished as follows: 1) differentiation of the cell layers at the edge of the shelves resulting in formation of a "zone of stickiness"; 2) fusion of these differentiated epithelial cells leading to the formation of a laminated wall of epithelium between the shelves; 3) rupture of that partition permitting contact between the elements of the mesenchyme from either side; and 4) degeneration of the epithelial remains at the seam. Histological and histochemical studies of epithelial cell acid phosphatase content were undertaken in palatal shelves undergoing permanent fusion *in vivo* and *in vitro* and embryonic eyelids which undergo temporary epithelial coalescence. In the stages preceding palatal fusion, acid phosphatase activity was minimal. As palatal fusion progressed, epithelium in contact displayed a distinct acid phosphatase reaction. After epithelial breakdown the remnants of the epithelial wall remained positive staining for acid phosphatase. The epithelial walls formed *in vitro* also displayed similar acid phosphatase activity as did the palatal shelves which were not permitted to fuse because of

prolonged isolation *in vitro*. Examination of embryonic eyelids in the mouse and in the rat revealed no acid phosphatase activity in the epithelial cells. This lack of activity continued until two days after birth when the peridermal cells trapped in the suture began to keratinize, thereby initiating the process of reopening. Thereafter the upper spinus layer cells exhibited a slight acid phosphatase activity. It is concluded that the synthesis of lytic enzymes is a prerequisite for the breakdown and disintegration of the epithelial wall prior to mesenchymal penetration during palatal fusion. These changes are not seen in the embryonic eyelid during temporary coalescence. (Weeks)

Bernstein, L., The effect of timing of cleft palate operations on subsequent growth of the maxilla. *Laryngoscope, 78,* 1510–1565, 1968.

The author has reviewed the literature pertaining to the modern concepts of surgery for cleft palates, the knowledge of normal and abnormal growth of the maxilla, the effect of timing of cleft palate surgery upon the development of speech, and the orthodontic aspects of posterior cross-bite; outlined the variations and morphology of facial clefts; and presented a study of 374 maxillofacial cleft patients, 325 of whom had surgical correction and 49 nonsurgical cases. Criteria for the evaluation of abnormal bite are outlined. It is concluded that this study indicates that maxillary growth and development and the appearance of the middle third of the face are definitely altered if operations are performed upon the palate before all of the deciduous molar teeth are in proper position, at about 24–30 months of age; the optimum time for cleft palate repair is between 30–36 months of age. There is an extensive bibliography. (Gregg)

Bethmann, W., Ursula Hochstein, and H. J. Hochstein, Caries incidence in labial and palatal clefts, with special consideration of the form of malformations. *Schweiz Msch. Zahnheilk, 78,* 147–156, 1968.

The incidence of caries in various facial malformations was studied in 710 children (304 girls and 406 boys) aged 3–14 yr, in the Thallwitz Clinic. The patients were allotted to 4 groups according to the type of malformation: median cleft palate (240 children); total bilateral cleft palate (110); total unilateral cleft palate (328); and labial and labial/alveolar clefts (32). A statistical study of caries incidence in deciduous and permanent dentitions was conducted in all patients to determine whether the severe malformations cause a higher incidence. There was no statistically significant difference between the occurrence of caries in children with severe forms of malformations, such as total uni- and bilateral cleft palate, as compared to those in the total number of patients presenting facial malformations. The severity of malformation does not exercise any particular influence on caries incidence; however, the caries incidence in deciduous teeth is higher in children suffering from facial malformations. The unoperated clefts play an important part in caries formation. (Ron/*Oral Research Abstracts*)

Bluestone, C. D., R. H. Musgrave, and B. J. McWilliams, Teflon injection pharyngoplasty—status 1968. *Laryngoscope, 78,* 558–564, 1968.

Twenty-seven patients whose ages ranged from 5 to 82 years had Teflon injected into the nasopharynx during a study of the use of Teflon to improve velopharyngeal closure function. Twenty of the patients were between the ages of 8 and 15 years. The methods of injection and techniques utilized are discussed briefly. The Teflon Injection Pharyngoplasty was reported to be successful in patients who had good levator activity and a small velopharygeal gap. Patients who have a large space will not be improved

totally by this technique because there is a certain amount of inferior spread of the Teflon paste as the quantity injected into the nasopharynx is increased. A large amount of adenoid tissue appeared to prevent as satisfactory a result as would be hoped for. The 27 patients who were followed from 2 to 35 months in this study showed no change in the position of the pharyngeal bulge. Twenty patients were followed for one year. The authors conclude that this study indicates that Teflon is an excellent implant material for the correction of velopharyngeal insufficiency in selected cases. (Gregg)

Braithwaite, F., and D. G. Maurice, The importance of the levator palati muscle in cleft palate closure. *Brit. J. plastic Surg., 21,* 60–62, 1968.

The levator palati and palato pharyngeal muscles and superior constrictor or palatopharyngeal sphincter of Whillis combine to effect nasopharyngeal closure in the normal patient. Cleft palate repair requires that these muscles be repositioned so that their action will cause narrowing of the nasopharynx. At operation, the muscular palate is freed from the posterior border of the hard palate, the superior constrictor is dissected from the medial pterygoid plate, and the hamulus is broken off. This allows the muscles to be repositioned medially before suturing is done. The sphincter is also narrowed by dissecting in the lateral pharyngeal spaces back to the posterior pharyngeal wall which allows medial displacement of the lateral walls. (MacGregor/*Oral Research Abstracts*)

Brown, K. E., Fabrication of a hollow-bulb obturator. *J. prosth. Dent., 21,* 97–103, 1969.

A step-by-step technical description of a laboratory procedure is outlined. The bulb is hollow in order to minimize the total weight of the appliance. All peripheral margins are made in the usual manner, taking advantage of all supporting areas for increased retention. The processing is done in two separate sections. The thought of a hollow inner chamber is an attempt to improve retention and stabilization of an obturator prosthesis. (Goldenberg)

Cantor, B. B., A comparative study of conditions as they affect the rehabilitation of the cleft palate patient in Japan, United States, and Canada. *Internat. J. Orthod., 5,* 129–157, 1968.

A team of 14 specialists compared the status of rehabilitation of the cleft palate patient in the U.S., Canada, and Japan. The team or multidiscipline approach is often successful where an individual may fail. All aspects for complete rehabilitation of the cleft palate child including educational audiology, voice and speech, surgical repair, and education facilities are available. The role of the government in research is ever widening, leading possibly to waste and inhibition of freedom to patient and doctor alike. Research programs are being set up to please a federal agency. The palatal flap push-back method was designed to improve phonetics. The patients were tested before and after the operation for medical history, extra-oral examination, gnathostatic survey, measurement of nasal air leakage at the time of blowing and speaking, breathing capacity, articulation, phonetic recording, diagram of abnormal speech, electromyogram, and cephalometric radiographs. Group and individual speech therapy and psychological tests were done. (Schleimer)

Chambiras, P. G., Speech and the cleft palate patient. *Ann. Aust. Coll. Dent. Surg., 1,* 86–93, 1967.

Velopharyngeal radiology is extremely valuable for assessment of mobility, configuration, and length of a cleft palate during speech. The 2 technics presently being

used include cephalometrics and cineradiography. The levator and velar portions of the palate display the most serious functional abnormalities. Elevation by the levator may be poor or absent. The levator eminence may be missing completely, and strongly indicating incompetency. The uvula may present the greatest anatomical variation and may be functionally immobile with gross inadequacy. Cleft palate speech problems also result from improper tongue movements, and this also can be assessed by radiographs. Abnormal lingual positioning opposes levator palatal action and depresses palatal movement. The site and configuration of the adenoid tissue during speech should be studied since adequate closure may depend on this tissue. In addition to providing essential diagnostic information on speech structures, velopharyngeal radiography also provides the opportunity for a longitudinal assessment of palatal growth and development. (Warren/*Oral Research Abstracts*)

Dambrain, R., Dentofacial orthopedic aspect of a case of orodigitalfacial syndrome. *Acta Stomat. Belg., 64,* 233–248, 1967.

A 5-yr-old girl had dry skin with alopecia and laterally displaced eyes. Other symptoms included epidermoid cysts of the ears, an abnormal cranium, malformed hands and feet, supernumerary fingers with brachydactylia and syndactyly, and mental retardation. The oral cavity exhibited a partially cleft lip, cleft palate, malposed teeth, conical incisors, enamel hypoplasia, and supernumerary teeth. The mandible was narrow and hypoplastic with an open bite. (Rosenthal/*Oral Research Abstracts*)

Demyer, W., The median cleft face syndrome: differential diagnosis of cranium bifidum occultum, hypertelorism, and median cleft nose, lip and palate. *Neurology, 17,* 961–971, 1967.

There is considerable confusion in the diagnosis of hypertelorism due to the lack of standardization of measurements. The author uses the term hypertelorism to mean lateral displacement of the eyes, eyelids, and orbits, as measured by an interorbital distance greater than two SD above the mean as determined by PA radiographs. In this paper hypertelorism was designated as the independent variable to determine whether other median face and brain defects could be regarded as variables dependent upon it. Hypertelorism occurred concomitantly with six other median facial defects: low V-shaped frontal hairline, cranium bifidum occultum, primary telecanthus, median cleft nose, median cleft upper lip and premaxilla, median cleft palate. The author includes eight personal cases plus 25 from the literature, and he presents a Differential Diagnostic Dendrogram to be used in determining the pattern for median cleft face syndrome. Seven defects associated themselves in four facial patterns, each described in some detail. If orbital hypertelorism combines with one or more of the six median defects to form one of the typical facies, the probability of normal or low-normal mentalities is high. If the hypertelorism is the sole facial anomaly, and it is extreme, or if it combines with extra cephalic anomaly, such as brevicollis, the probability of mental retardation is considerable. If one of the six defects other than hypertelorism occurs in isolation, it seems to have no obvious relation to mental deficiency. (Gregg)

Dion, M. A. and J. Parenteau, Rotation-advancement technique in unilateral cleft lips. *Canad. J. Surg., 11,* 176–178, 1968.

The Millard procedure, which involves the principle of lip rotation advancement, has been used as the primary method of repair in 44 children with unilateral cleft lip defects at the age of three months, under general endotracheal anesthesia. After the operation, the patient is placed in a croupette and the suture line is kept clean with hydrogen peroxide. In eight

children, this procedure was used for secondary repair. This operation gives a better contour to the nostril on the cleft side and the lower part of the philtrum is not distorted. (*Birth Defects: Abstracts of Selected Articles,* The National Foundation-March of Dimes, *5*(6), abstract number NF-MOD 68 497.)

Epois, Viviane M., Preoperative expansion and bone graft in the treatment of total hare lips with cleft palate. Doctoral thesis, University of Paris Medical School, 1968.

Forty patients were studied. The results indicate that preoperative expansion and bone graft is beneficial in patients with narrow clefts or clefts of moderate width. The results were inconclusive for patients with bilateral clefts. (Psaume)

Fine, R. N., J. W. Gwinn, and E. F. Young, Smith-Lemli-Opitz Syndrome. *Amer. J. Dis. Child., 115,* 483–485, 1968.

A report of a case with characteristic facies: small skull, bilateral ptosis, small nose with anteverted nostrils, micrognathis and low set ears slanted away from the eyes. Additional cases as well as a complete review of the literature are listed and all clinical findings are summarized. Posterior palatal cleft involving the uvula has been reported in three patients. A genetic etiology is implied. (Berkowitz)

Fishman, L. S., and D. B. Stark, The maxillary arch prior to surgical closure of a cleft lip. *Plastic reconstr. Surg., 42,* 572–576, 1968.

An ingenious method to obtain quantitative evaluation of alveolar segment positions is described. Facial plastic casts which included the face, lip, and palate, were made just prior to surgery, but with the patients under anesthesia, in 16 cases of unilateral and bilateral cleft lips with and/or without cleft palate. The medial and lateral canthi and the mid-point of the glabella area were marked on the models so made using soft brass wire. Brass wire was overlaid on the alveolar segment crests. A special positioning apparatus permitted X rays to be taken, in turn permitting tracing of the composite facial and maxillary markings on acetate film. Bisection of the lines connecting the right and left medial and lateral eye markings permitted establishment of a mid-sagittal plane. It was then possible to establish the position of the anterior and posterior borders of the cleft segment and the premaxillary border in terms of angular deviation from the mid-sagittal line. Although prior to operation many cases showed medial anterior displacement of the lateral segment and, very often, lateral displacement of the posterior alveolar border, the premaxillary alveolar area was almost always rotated anteriorly. No comparison of pre- and postoperative findings is presented. Basic questions such as the reproducibility of the method and the validity of the determination of the mid-sagittal plane are not considered. (Cosman)

Gorlin, R. J., and H. Sedano, Diastrophic dwarfism. *Modern Medicine, 37,* 202–203, 1969.

The authors have presented a succinct discussion accompanied by vivid illustrations of the syndrome which includes progressive kyphoscoliosis usually evident at birth, micromelic dwarfism, talipes equinovarus, anomalies of the pinna, restricted joint motion, adduction of the thumbs and halluces, severe epimetaphyseal ossification defects, and cleft palate. This is an autosomal recessive trait. About 50 cases have been reported. About 40% have cleft palates. (Gregg)

Gorlin, R. J., and H. Sedano, Popliteal pterygium syndrome. *Modern Medicine, 37,* 144–145, 1969.

A brief description accompanied by vivid illustrations of this syndrome are

presented. Less than 30 cases have been described. Included in the syndrome are the following: skin web extending from the heel to the ischial tuberosity, hypoplasia or agenesis of digits, talipes equinovarus, syndactyly of the hands and feet, a pyramidal skin fold on the hallux, filiform adhesions joining the eyelids, cryptorchidism, absent or cleft scrotum, inguinal herniae, absence of the labia majora, infantile uterus, intercrural pterigium, cleft palate and/or lip, and lower lip pits. (Gregg)

Gorlin, R. J., J. Yunis, and V. E. Anderson, Short arm deletion of chromosome 18 in cebocephaly. *Amer. J. Dis. Child., 115,* 473–476, 1968.

A report of a case of a premature girl born with a peculiar facies of a single nasal orifice, ocular hypotelorism, and a depressed nasal area. The palatal shelves were incompletely fused with the nasal spine. Post mortem examination revealed chief changes were those in the cranial cavity. Cerebral variations from the normal are described. Associated chromosomal aberration has been found in this case as well as two other cases of cyceopia, and in arhinencephaly with premaxillary agenesis. Two likely genetic causes of holoprosencephaly are given. (Berkowitz)

Hollman, K., The procedure of incision into the mucous tissue when operating on the lip-palate area of a cleft of the hard and soft palate. *Deutsch Zahn-, Mund-, und Kieferheilkunde, 51,* 23–28, 1969.

On wide clefts of the lip and the hard and soft palate, which were repaired by the Veau method, the author observed very frequently a scar tissue formation in the area of the introitus nasi which always interferred with the breathing through the nose. At the same time most always the vermilion of the cleft side was vestibularly located and there was less tissue than on the healthy side. Through the according procedure of incision and mobilization of the soft parts, which are attached to the bone, it was possible to correct these after effects. The above mentioned procedure of incision can be practiced in analogous manner by individual surgeons. To the credit of the author, it has been made possible to analyze two of the most frequent occurring errors in cleft surgery and also to show a procedure of incision through which such errors can be eliminated. (Moser)

Kawaguchi, H., T. Yasuno, and H. Itoh, A family with cleft palate associated with multiple twin births. *Otolaryngology, 40,* 465–469, 1968.

A family with a history of harelip and cleft palate associated with a higher than average incidence of twin births is reported. Evidence from both the family history and the literature is considered to point to a major role for heredity in the occurrence of both variations, but to be inconclusive as to a common genetic factor in their occurrence despite showing a definite tendency for twin births to occur in families with a history of cleft palate. Of the possible environmental factors in the development of congenital defects, the anterior pituitary hormonal substance may offer an explanation for the frequency of twin births in families with cleft palate. (*Birth Defects: Abstracts of Selected Articles,* The National Foundation-March of Dimes, *5*(9), abstract number NF-MOD 68-745.)

Khubenova, Zh., and G. Georgiev, Three cases of Pierre Robin's syndrome in newborns. *Akush. Ginek (Sofiia), 7,* 209–212, 1968.

Report of one male and two female newborns with micrognathia, glossoptosis, and cleft palate. In addition the male had microcephaly, cryptorchism, and signs of intracranial hemorrhage, and one of the

females had shaggy eyebrows, long eyelashes, normochromic anemia, microcephaly, and a marble-like skin. A diagnosis of Cornelia de Lange's syndrome was considered in the latter case but was ruled out because there were no other anomalies of the CNS, eyes, extremities, or viscera; her karyotype was normal. The male died of bronchial pneumonia at 20 days and the most severely affected female at six months. The mother of one female reported bleeding for several days during the first half of her pregnancy; the other two infants were products of normal pregnancies. (*Birth Defects: Abstracts of Selected Articles,* The National Foundation-March of Dimes, *5*(9), abstract number NF-MOD 68-747.)

Koch, J., The corrective operation of unilateral cleft lip with special consideration of the incision of Millard. *Zbl. Chir., 92,* 666–671, 1967.

Clinical data show that postoperative results based on Millard's technic are fully satisfactory in esthetic and physiologic aspects. The complete reconstruction of a cleft lip requires the cooperation of the surgeon, orthodontist, and rhinologist. The best time is after age 15 yr. (Horbal/*Oral Research Abstracts*)

Kriens, O. B., An anatomical approach to veloplasty. *Plastic reconstr. Surg., 43,* 29–41, 1969.

The author reviews the anatomy and function of the velopharyngeal musculature in normal and cleft palate patients. On the basis of this study mobilization of the velar halves is recommended in the area of the abnormal muscle anatomy, *i.e.,* in the cleft velum proper. Severance of the longitudinal tensor tendon guides the surgeon in between the anterior portions of the palato-pharyngeal constrictor and the salpingo-palato-pharyngeal muscle groups. Backward rotation of the anteriorly and laterally displaced insertions of the "cleft muscle" of Veau facilitates the formation of a transverse muscular sling through the repaired soft palate. This method has been performed in 51 cases and evaluated in 37. All of these are said to have had a satisfactory result so far as speech and hearing are concerned but the results are still considered tentative. The reconstitution of this muscular sling with special attention paid to the anatomical relations of the cleft velar muscle to the Eustachian tube is felt to be justified by these results. (Cosman)

Kurry, G., S. Chaube, and M. Murphy, Teratogenic effects of some purine analogues on fetal rats. *Arch. Pathology, 86,* 395–402, 1968.

The optimum teratogenic dose (the lowest single dose which produces 100% grossly abnormal fetuses) of Mercaptopurine and 5 other adenine analogues was determined in rats. Apparently the optimum teratogenic dose of Mercaptopurine and mercaptopurine riboside (62.5 mgm/kg) produced a 100% incidence of cleft palate in surviving fetuses. Mercaptopurine 3-N-oxide administration resulted in 6/32 fetuses with cleft palate. 6-hydroxylaminopurine administration produced cleft palates in 12/46 fetuses and cleft lip in 3/46 fetuses. Cleft lip was not observed in any other groups. Histologic study from the 12th day to the 19th day of gestation was primarily directed to the frequent urogenital abnormalities observed. No histologic observations of cleft lip or palate development are reported. (Weeks)

Lund, B., and M. Mikkelsen, Partial trisomy syndrome. *Acta paediat. Scand., 57,* 170–171, 1968.

Cytogenetic studies on a 15-month-old male showed 47 chromosomes, with the extra one belonging morphologically to the 21-22-Y group. Autoradiographic studies proved it to have earlier DNA replication

than most of the other chromosomes. It is suggested that the chromosome was a deleted No. 17. The proband suffered from psychomotor retardation, and had a receding chin, cleft palate, and large, low-set ears. He had an underdeveloped scrotum with a short penis adherent to it. There was also an atrial septal defect with a left-right shunt. An EEG was grossly abnormal and a pneumoencephalogram showed central atrophy. Both parents had normal chromosomes. Hare-lip, encephalopathy, and reduction of hearing were present in the family history. Both the clinical findings and the boy's symptoms were compatible with partial 13–15 and 17–18 trisomy syndromes. Whether the cleft lip was due to the extra chromosome could not be determined. (*Birth Defects: Abstracts of Selected Articles,* The National Foundation-March of Dimes, *5*(7), abstract number NF-MOD 68-598.)

Machida, Junji, Studies on the length of speech interval and articulatory mechanisms of cleft palate patients. *J. Osaka Univ. Dent. Soc., 13,* 13–26, 1968.

Physical characteristics in consonant-vowel (CV) syllable production and the reasons for defects in the repeated syllables of cleft palate subjects were clarified. Production of an isolated CV syllable/sec and 5 repeated CV/sec were compared. Thirty-six postoperative cleft palate adults were selected and classified in 2 groups according to articulatory performance, as judged by 7 speech pathologists. Those who could produce both the isolated and the repeated syllables sufficiently were in group 1 and those who could speak the isolated set well but not the repeated one were in group 2. Fourteen normal adults served as a control group. The oral and the nasal airflow rates were measured with a differential pressure flowmeter and the intraoral pressure was measured with a strain gauge. Velopharygeal size was calculated from the parameters, and time relations of the parameters were measured. In the normal and in the cleft palate group 1, the maximum values of intraoral pressure, of nasal airflow rate, velopharyngeal size, and time relation of the patterns revealed no significant differences between the isolated and the repeated CV of each group. In the repeated syllables of the cleft palate group 2, velopharyngeal size became larger with the decrease of the amount of air pressure, and time relation deviated. A single factor or combinations of these factors would be considered as the cause(s) of the articulatory deficiency in the repeated syllable production of cleft palate subjects. (Tsuchitani/*Oral Research Abstracts*)

Maslenkova, N. B., Hospitalization of patients with congenital maxillofacial malformations in different districts of the Ukrainian SSR. *Stomatologiia (Moskva), 46,* 96–98, 1967.

Malformations of the palate and lips are responsible for approximately 30% of all maxillofacial malformations. In 1963, 1,316 persons were hospitalized for maxillofacial malformations (740 males and 575 females). One-third were under 1 yr of age, and 10.2% were between the age of 1–2; there were 685 instances of cleft palate; 280 of cleft lip; 211 of cleft lip and cleft palate; and 22 of congenital fistula. The average length of hospitalization was 22.9 days; 82.4% of the patients underwent surgical intervention. The hospital facilities vary between districts and the creation of 3–5 medical centers for the treatment of maxillofacial malformations is necessary. (Ron/*Oral Research Abstracts*)

Matsuya, Tokuzo, Basic studies on articulatory mechanisms of abnormal consonants phonation in cleft palate patients. *J. Osaka. Univ. dent. Soc., 13,* 45–57, 1968.

The consonant distortion of cleft palate subjects was studied. Forty-two cleft pal-

ate adults and 14 normal adults were selected. Intraoral air pressure was measured simultaneously with nasally escaped airflow and sound-wave during cardiovascular productions. Differential pressure head and strain gauges were used to detect the air pressure and the airflow rate, respectively. Intelligibility of the speech was judged both by sound spectrograph and by a team of 8 speech pathologists. The peak of the intraoral air pressure, in normal speakers, was located just before and after the beginning of the consonant waves in voiceless plosives and in voiced plosives and fricatives, respectively. In the cleft palate group, the relation of the location of the peak to the onset of the consonant was nearly the same to that of the normal group. The amount of the peak pressure, however, was much less than that of the control group. The peak value of the intraoral air pressure showed significant relations to the articulatory intelligibility, and more than 22 mm of water was necessary to obtain acceptable articulation. The amount of nasally escaped air measured during articulatory performances did not always show a close relation to the articulatory intelligibility. The peak value of the air pressure was not always determined by the amount of the nasally escaped air. (Tsuchitani)

Millard, D. R., Extensions of the rotation-advancement principle for wide unilateral cleft lips. *Plastic reconstr. Surg., 42,* 535–544, 1968.

Objections to the author's now widely accepted method of cleft lip repair have centered upon deficiencies in its application to wide cleft lip defects in which the lateral element is small. This article presents a number of maneuvers designed to overcome the difficulties involved in this sort of case. These refinements include emphasis on a radical rotation using a small back cut if need be, unilateral columella lengthening, a perialar incision for lateral advancement, and radical alar freeing by division of nasal mucosa along the pyriform margin. Kinking of the rotated alar rim and vestibular folding are treated by rim incision and suturing of the exposed cartilage-nasal mucosal flap across to the opposite alar cartilage. Minor excisions at the lower wound edge may be needed to achieve good approximation in the lip. The previously described white skin roll interdigitation flap is reemphasized. The deficiency of the lateral element vermilion mucosa is treated by a triangular flap rotation-interdigitation from the fuller cleft side on the inner surface of the lip. Persistent flatness of the cleft side may require later onlay bone grafting. The rotation-advancement principle facilitates later secondary correction. It is revealing that despite the refinements he has introduced in the primary repair, the author, in a continuing search for perfection, finds minor secondary corrections to be indicated often—slightly more often in wide than in incomplete clefts. (Cosman)

Millard, D. R., and S. Williams, Median lip clefts of the upper lips. *Plastic reconstr. Surg., 42,* 4–14, 1968.

Vertical clefts through the center of the upper lip are classified as median clefts and include 2 subgroups: agenesis of the frontonasal process with associated cerebral abnormalities, and cleft of the median element. Examples illustrate the anatomic variables. (Handelman)

Myers, G. S., N. L. Petrakis, and M. Lee, Factors influencing fusion of rat palates grown *in vitro*. *Anat. Record, 162,* 71–81, 1968.

A method for *in vitro* culturing of palatal shelf structures to permit precise control of nutrients and to allow manipulation of the tissue fragments is described. Rat embryos were obtained in the 14th to 15th day of gestation and the palatal shelves, including surrounding maxillary tissue, and a portion of the nasal septum were

transferred into culture chambers. The cultures were incubated for 72 hours during which time a high rate of palatal shelf fusion was obtained. The number of fusions obtained in Waymouth's MB-752-1 media in 26 animals was 73%, whereas palatal shelves placed in Leibovitz-L-15 media augmented with 20% fetal calf serum, exhibited a fusion rate of 87%. Utilizing the latter media the authors determined the effect of galactoflavin on palatal shelf fusion when given in the maternal diet and when incorporated in the culture media. In both circumstances, there was a decrease in the percentage of complete palatal fusions and an increase in the percentage of partial fusions. They were further able to demonstrate fusion after approximation of palatal shelves from different embryos. Thus the method provides a means of determining the effects of various environmental and hereditary factors on palatal fusion. (Weeks)

Novotyn, L., and J. Pazinka, Pierre-Robin syndrome. *Cesk. Oftal, 23,* 456–457, 1967.

Eight short case histories of patients with Pierre-Robin syndrome are discussed. Cleft palate was observed in 5 of the patients. Four of those examined died soon after birth. (Červenka/*Oral Research Abstracts*)

Perczynska-Partyka, Wieslawa, A modified vestibulo-palatal plate for preoperative orthodontic treatment of cleft upper lip, alveolar process, and palate in infants. *Czas Stomat., 21,* 63–68, 1968.

The modified vestibulo-palatal plate is used for preoperative orthodontic treatment of cleft lip, palate, and alveolar process. The apparatus consists of palatal and vestibular plates combined in a single unit. The frontal section has a small opening for a nipple. Because of the natural sucking movements of the infant, the plate has a stimulating effect on the cleft jaw. As a result, new bone is formed in the area of the fissure on the alveolar surface and hard palate. The vestibulo-palatal plate acts also as an obturator, facilitates nursing, and enables the infant to breathe through his nose. The plate usually remains firmly in place and only seldom are wire loops necessary outside the oral cavity and lips. Impressions for this plate have to be made with utmost care. The patient is either placed on his back with his head lower than the rest of his body or sitting down with his head bent slightly forward. During the setting of the compound, the infant is placed sitting down, upright. Metal or acrylic impression trays are used. The tray's edges are covered with tape for better adhesion of the compound and to prevent overflowing of its excess. Alginate compound, mixed with tepid water for quicker setting, is used for impressions. The setting of the compound takes 30–90 sec. On the plaster working model of the maxilla and mandible, the location of the plates is marked by a line. The relief zone of the larger and smaller section of the alveolar process, as well as the roof and edges of the cleft palate, are determined, and the cleft area is marked with pink wax up to the previously marked line on the palate. The front pole of the larger section of the alveolar process from the dorsum of the tongue side and its smaller section from the lip and roof side are covered with a wax layer 5–8 mm thick. The remaining alveolar surfaces on the side of the cheeks and roof are covered with a wax layer approximately 1 mm thick. This creates a free area between the apparatus and parts of the jaw which enables the growth and translocation of bone in the desired direction. The palatal plate is constructed in wax on the plaster working model; the vestibular plate is formed when the maxilla and mandibular models are placed in proper occlusion. The 2 plates are then joined, the wax model of the apparatus is

tried on, and special attention is given to the location of the vestibular plate during mandibular movements. The points where the wire loops should be attached (if necessary) are marked. The position of the apparatus in the oral cavity is then examined and an opening for the nipple is marked. In instances of bilateral clefts, the technic is similar. The loops are made of stainless steel wire 0.9–1.0 mm thick. The apparatus is made of transparent acrylic resin. (Fahn)

Pfeifer, G., *The Disturbances of Development of the Facial Bone Structure as a Problem of Classification.* Hamburg-Eppendorf: The University Clinic and Polyclinic for Dental, Oral, and Jaw Diseases, 1968.

The presented classification is based on areas of vertebrate classification. The developmental disturbances appear in the prosencephalic or forehead region, the prosencephalic-rhombencephalic or border area, the rhombencephalic or posterior head region, the rhombencephalic-spinocaudal or border area, and the spinocaudal or trunk and extremities region. Malformations are precisely described in the development of the work. The principal of classification presents a combination of embryonic and postnatal morphology. (Moser)

Pigott, R. W., The nasendoscopic appearance of the normal palato-pharyngeal valve. *Plastic reconstr. Surg., 43,* 19–24, 1969.

A fiberoptic urethrascope is passed through the nose making possible the direct observation of palato-pharyngeal action in speech. 25 normal volunteers were tested. The finding that the musculus uvulae played a definite part in the palato-pharyngeal valve mechanism was an unexpected observation. Comparison of the results in these normal subjects and in cleft palate patients will be presented in a subsequent paper. (Cosman)

Pigott, R. W., J. F. Bensen, and F. D. White, Nasendoscopy in the diagnosis of velopharyngeal incompetence. *Plastic reconstr. Surg., 43,* 141–147, 1969.

25 patients, each 8 years old or older, were examined with the American Cystoscope Company's fiberoptic infant cystoscope. The point of closure on the posterior pharyngeal wall is observed while the patient phonates. Each sound is repeated to allow visualization of the lateral gutters as well. The demonstration of the large lateral gutters or asymmetrical spaces in some cases, the demonstration of island flaps that had extruded from the palatal surface, and the demonstrations of deficiency in the uvular musculature, and of the actual relations of palates and obturators seemed of clinical importance in 14 of 23 patients who completed this testing. The information obtained seemed greater than that obtained in routine examination in this group of patients. (Cosman)

Robertson, N. R. E., Micrognathos (or Pierre-Robin Syndrome): the early management of patients. *Brit. dent. J., 125,* 395–397, 1968.

An intraoral splint is described which incorporates a Guedel Airway. The splint is maintained in situ by extraoral fixation. The splint is worn at all times except for feeding when a conventional splint extending to the soft palate area is used. With the use of these appliances infants may be nursed semi-prone after a short time on a Burston type cradle and allowed home within a few weeks. (*Brit. dent. J., 112,* 291–292, 1962.) Sixteen cases had been treated over a period of two years. One of these two was classed as mild, nine as moderate, and five as severe. There was one death due to another coexisting congenital anomaly. (Hopkin)

Rowley, J. D., Cytogenetics in clinical medicine. *J. Amer. med. Assoc., 207,* 914–919, 1969.

A word of caution is in order. Chromosome kits are commercially available and anyone with an incubator and centrifuge can prepare slides of chromosomes. Chromosomal analysis is a very time-consuming procedure demanding precise attention to seemingly minute details. Analysis of chromosomal patterns requires sufficient training to recognize and apply the criteria described above and the experience to be able to avoid a variety of subtle pitfalls. A basic knowledge of genetics is essential for the interpretation of some of the chromosomal abnormalities observed in the laboratory. Given competent, carefully trained, and adequately supervised personnel, karyotypic analysis is a valuable adjunct to clinical medicine. (author's summary/Gregg)

Shaw, E. B., and H. L. Steinback, Aminopterin-induced fetal malformation. *Amer. J. Dis. Child., 115,* 477–482, 1968.

A report of a case of marked facial abnormalities due to the ingestion of sodium aminopterin which was ingested during early pregnancy to produce an abortion. The physical findings were bizarre and almost duplicated those described by Warkany. Although the palate is highly arched there was no cleft. At the age of four and one-half years, she is perhaps the only living example of this syndrome. (Berkowitz)

Tanaka, Katumi, Hiroshi Fujino, Hideo Tashiro, and Yoshiharu Sanui, Recurrent risk of cleft lip and palate among relatives of patients with special consideration on sex and racial differences. *Jap. J. hum. Genet., 12,* 141–149, 1967.

Sex differences in the incidence of a congenital anomaly may be related to differences in the threshold number of genes necessary for the expression of the defect in a polygenic system. This hypothesis is based on the assumption that the sex showing the smaller population incidence of the trait is more likely to transmit the trait than the sex showing the greater incidence. Recurrent risk is reported for 7,213 siblings and 326 offspring of cleft lip or cleft palate patients, or both. The data suggest that the risk is greater in a sex of lower incidence in the Japanese general population than in the opposite sex. In the general population, the frequency of cleft lip with or without cleft palate among siblings of male simple cleft lip propositi is slightly greater than that of female propositi. Cleft lip with cleft palate is nearly twice as frequent among males, and the recurrent risk among siblings of male patients is only half that of the female ones. The incidence of simple cleft palate among males is nearly half that of females and the recurrent risk for relatives of male propositi is slightly higher than that for females. Cleft lip (with or without cleft palate) is primarily controlled by polygenic systems with differential threshold levels by sex; the evidence for cleft palate does not fit this concept. (Aduss/*Oral Research Abstracts*)

Tolarova, M., Z. Havlova, and J. Ruzickova, Distribution of indexes considered as microforms of cleft lip and/or cleft palate in a normal population of three-to-six year old individuals. *Cesk Pediat., 23,* 323–329, 1968.

1,018 children, 3–6 yr of age, were examined to determine the frequency of orofacial irregularities. Sixty-four types of irregularities were investigated; some of them were considered to be microforms of fissure. The results were compared with a former, similar investigation on individuals 18–21 yr of age. Uvula fissure, medial crista, reduplication of the superior lateral incisors, coloboma of the upper lip, and asymmetrical decline of a nostril were found more frequently in children than adults. Reduplicated frenulum, collapsed

nostril, anodontia of superior lateral incisors, and atypically shaped teeth were less frequent in children than adults. A simultaneous occurrence of several signs was observed and discussed. (Plackova/*Oral Research Abstracts*)

Torres, Javier Sanchez, and Cristina Eguiarte, The present management of cleft palate. *ADM, 24,* 355–362, 1967.

A review with 31 references through early 1967. Subjects include embryology, etiology, anatomy, associated anomalies and problems, frequency and incidence, types of fissures, a list of the members of the cleft palate treatment group, and the role each member plays. (Sydow/*Oral Research Abstracts*)

Ueno, M., K. Kitamura, M. Matuyama, H. Negi, G. Seo, M. Hirakawa, and T. Kyoyama, A nerve-histological study on the healing process of cleft lip operation. I. An experimental study in dogs. *J. Kyushu dent. Soc., 21,* 397–405, 1968.

Under general and local anesthesia, 10 dogs, 6–12 months of age, had their upper lips operated on to create appropriate tissue defects shaped as near as possible to human cleft lips. On the 3rd, 7th, 14th, and 56th days after the suture, appropriate portions of tissues involved were excised from each animal and allowed to be fixed in a nerve staining solution. Lining of the injured tissues by the mucous epithelia took place slightly earlier than that by the dermal epithelia in the primary stage of healing. There were deposits of blood clots seen between joining surfaces of suture which soon became replaced by granulation tissues; the latter eventually led to a scar formation. The scar showed no sign of a hair root nor of sebaceous gland, except for a few muscle fiber regenerations. By the 3rd day after operation, there were extensions of immature blood vessels and redistribution of the vegetative nerve fibers in the blood clots and granulation tissues. This early appearance of vegetative nerve fibers suggested they had an important role in promoting healing of the wound aided by simultaneous distribution of blood vessels. In the course of time, however, these nerve fibers became sparse in number and were replaced by an increasing number of sensory nerve fibers. (Matsushita)

Vrebos, J., Plastic surgery and otorhinolaryngology. III. The treatment of cleft lip, alveolus, and palate. *Acta Otorhinolaryng. Belg., 21,* 469–663, 1967.

A child with a cleft lip and cleft palate is to be considered as a patient from birth to the age of 18–20 yr and has to be kept under supervision during this period. Various technics of cheiloplasty are surveyed and the essential steps of the operation and postoperative care are described in detail. In the treatment of bony clefts of the palate, modern orthodontic methods aiming at alignment of the hypoplastic segment in infancy and providing an obturator in preparation for surgery are discussed. The advantages of a bone graft in the palatal cleft are enumerated. The graft must be covered on both the buccal and the nasal sides. This is done when the infant is approximately 6 months old. In the repair of bilateral clefts, the whole prolabium must be preserved. The premaxilla must never be excised. Various methods of realignment and fixation of the premaxilla, surgical and orthodontic, are discussed in detail. Closure of the cleft does not present a problem, but the reconstruction of a mobile and functionally adequate soft palate is difficult and may be impossible, because of the absence of tissue at the surgeon's disposal. The following are possibilities: lengthening of the soft palate (push back operations); bringing the posterior pharyngeal wall forward by pharyngoplasty; and permanent suture

of the soft palate to the posterior pharyngeal wall (velopharyngopexy). Of these, push back operations are recommended, pharyngoplasty disapproved of, and velopharyngopexy reserved for patients who for some reason or other have not been operated on before the age of 6–8 yr. Anesthetic problems and postoperative complications are discussed (nasal deformities, palatine fistulas, rigid soft palate, etc.). The orthodontist considers preoperative treatment essential in patients with primary and secondary palatal clefts in which there is overlap and in patients with bilateral clefts with protrusion of the median tubercle. Introduction of the intermaxillary bone graft has made the work of the orthodontist easier. The treatment of rhinolalia aperta by pharyngoplasty is discussed. In fixation of the soft palate to the posterior pharyngeal wall for the most severely affected patients, a pharyngeal pedicle flap with its base above gives better results than a similar flap based below. Plastic procedures for narrowing the nasopharynx by flaps from the lateral walls and reinforcement of the posterior pharyngeal wall by implants for the less severe cases are described. (Excerpta Medica/*Oral Research Abstracts*)

Wada, Takuro, Cineradiographic analysis of articulatory movements (in normal and postoperative cleft palate subjects). *J. Osaka Univ. Dent. Soc., 13,* 105–122, 1968.

A study was designed to determine the correlation between the velopharyngeal mechanism and the tongue constriction mechanism as a function of time. The cineradiographic technic with the synchronization system and correct time measurement was used. Subjects were classified in 3 groups: normal (I), repaired cleft palate with good speech (II), and repaired cleft palate with poor speech (III). Speech samples consisted of 5 Japanese vowels and 5 consonants. The cineradiographic observations showed that the position of the tongue-palate closure in consonant sounds was varied with its subsequent vowel; in the process of the movements of those oral structures, some positions showing the acoustical and physiologic characteristics of speech articulation could be found. The quantitative analysis in time measurement revealed that the cooperative function of the soft palate and tongue movements was quite adequate in I and II, despite the mobility disturbance of the soft palate in the latter. Alternatively, in III, the cooperative function was either inadequate or not present. The dysfunction of cooperation in these 2 structures is one of the causes of poor speech in the postoperative cleft palate patients. (Tsuchitani/*Oral Research Abstracts*)

LETTERS TO THE EDITOR

Dear Editor:

To my surprise I read the following lines that were inserted into my article "Repair of Unilateral Cleft Lip-Nose", published in October 1968. The note says: "It should be noted that Rees, Guy and Converse have described a similar operation and used a full thickness skin graft to line the defect in the lateral portion of the alar wing". The statement was not made by me and is totally incorrect.

However, as you could easily find out from the reprint, which I am including, the technique was published for the first time in 1963 by Spina, et al., in the *Revista Latino-Americana de Cirurgía Plástica, 7,* 259, 1963.

It is also very strange to know that Dr. Rees who had received my reprint of the 1963 paper did not mention my work in his text and references.

I hope this explanation will clear any doubts and I would thank you if you publish this note in the next number of the *Cleft Palate Journal.*

Victor Spina, M.D.
Rua Costa, 84
São Paulo, Brasil

Dear Dr. Spina:

Thank you for your letter of 25 March 1969.

I am sincerely sorry that your article in October 1968 *CPJ* misrepresents your point of view. In addition, I cannot account for how the error occurred. No one in the Editor's office does such editing unless authorized by the author. My only explanation is that a reviewer, acting in what he considered your best interest, made the insertion and we interpreted the insertion as your writing.

I will publish your letter and my apologies in the July 1969 *CPJ.*

Again, I'm sorry.

Editor

Dear Doctor Spina:

I have received your letter and the reprint of your paper "Nasal Deformity in Unilateral Cleft Lip" along with a copy of your correspondence to Dr. Morris. I was a little bit surprised at your statement that you had sent me a reprint of this article of yours in 1963, as I quite honestly am not aware of it. It is not in my files, and I do not recall having seen it; however, on reading the reprint now I find no reference made to relining the raw surface on the inside of the nostril with a free, full thickness skin graft, which was the major point of the article written by me, Guy, and Converse.

In any event, the technique for cross-hatching the cartilage was first described by Lipsett a number of years ago and was presented by him in 1959 at the London conference. We did mention this reference in our bibliography.

I first used this technique in conjunction with Sir Archibald McIndoe in 1955 and since that time have done a number of full thickness skin grafts to reline the nostril.

In any event, we are really discussing modifications of techniques, and the only contribution that we can claim, that may or may not be original, is the addition of a full thickness skin graft for lining the raw surface.

I am deeply sorry if I have offended you in this, but as I said before, I was truly not aware of your excellent article until you sent it to me at this time. I will certainly cite your reference in any future publication on this subject.

Thomas D. Rees, M.D., F.A.C.S.
176 East 72nd St.
New York, New York

ERRATUM

Drs. Horton and Ashbell, authors of the article "Tongue-Tie", which appeared in the January 1969 issue of *CPJ,* have brought two errors to our attention.

On page 16, at the end of their section on speech, reference number *17* should have been omitted. The reference is to the personal communication cited in footnote 1. On page 13, the sixth line from the bottom of the page, a line of type was omitted. The text appeared: "This extreme failure of mandibular arch development appeared to provide the repetitive thrust on which this development depends". The sentence should have read: "This extreme failure of mandibular arch development appeared [to be a direct consequence of the aglossia, as no tongue was available] to provide the repetitive thrust on which this development depends." Our apologies to the readers and our thanks to the authors for informing us of the error.

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.

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.

The course "Rhinoplasty for the Beginner" will be given the week of November 3–8, 1969. The tuition fee will be $300 and enrollment will be limited to 14. The course is designed to cover all aspects of Corrective

Rhinoplasty and Septal Surgery. In addition to lectures and demonstrations, ample laboratory practice will be provided. Guest faculty will include Jack R. Anderson, M.D., New Orleans, Louisiana, and William K. Wright, M.D., of Houston, Texas. Preference will be given to applicants from teaching institutions. Application forms are available from Leslie Bernstein, M.D., D.D.S., Associate Professor, University Hospitals, Department of Otolaryngology and Maxillofacial Surgery, The University of Iowa, Iowa City, Iowa 52240.

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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Changes of address and subscriptions to the Cleft Palate Journal *should be addressed to the Treasurer: Dr. Morton S. Rosen, 30 North Michigan Avenue, Chicago, Illinois 60602.*

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Duane C. Spriestersbach, Ph.D. (ex-officio)

Time and Place

Doris P. Bradley, Ph.D. (Chairman)
Eugene Gottlieb, M.D.
Donald T. Counihan, Ph.D.
Richard C. Webster, M.D.
Mohammad Mazaheri, D.D.S.

Association Finances (ad hoc)

Gene R. Powers, Ph.D. (Chairman)
Charles R. Elliott, Ph.D.
Lester M. Cramer, M.D.
Stuart I. Gilmore, Ph.D.
Haskell Gruber, D.D.S.
Robert F. Sloan, Ph.D.