

BOOK REVIEWS

SCHUCHARDT, KARL, *Fortschritte der Kiefer-und Gesichts-Chirurgie* (Advances in Surgery of Jaws and Face). A Yearbook, Vol. V, text in German, Stuttgart, Germany: Georg Thieme Verlag, 1959. Pp. 369. Ganzl. DM 118.

This is the fifth volume in a yearbook series (initiated in 1955) to report the transactions of the annual meetings of the German Society of Maxillofacial Surgery. The book contains the scientific papers of 55 authors which were read before the Society at the 1958 meeting in Hamburg. The major part is devoted to 'Pain prevention and pain reduction in the field of jaws and face' and 'New methods in the treatment of fractures of jaws and face'. The minor part of about eight pages of the text is concerned with cleft lip-cleft palate problems which are under review.

In the first paper, Ritter deals with the assessment of the premaxilla in cleft palate infants from the viewpoint of the maxillofacial surgeon, the orthodontist, and the prosthodontist. He states that the premaxilla usually aligns itself normally with the dental arch after successful lip repair, that bone grafting is not necessary for its fixation or for the avoidance of anomalous bite, that by orthodontic treatment it is always possible to obtain a normal dental arch at school age, and that the least difficulties due to abnormal position of the premaxilla may be handled by protheses. These statements are in opposition to the intensive efforts of the mounting number of those orthodontists and surgeons who regard the results of conventional treatment done heretofore as unsatisfactory. That bone grafting may complicate the matter seems to turn its philosophy upside down. On the contrary, stable fixation of the premaxilla by bone does not impede orthodontic treatment but prevents orthodontic relapse, and helps in wearing fixed protheses. The author concludes that bone grafting deserves recognition although it is not necessary.

The next contribution, by Schrudde and Stellmach, is entitled 'Primary osteoplasty and orthopedics in cleft lip and palate'. It is the original paper on the use of bone grafting in infants. In the statement of Axhausen, the absence of bone connection to the lateral segments is regarded as the major problem in the surgery of this abnormality. The procedure of bone grafting in infants six months of age at the same time as plastic repair of the lip and anterior floor of the nose was called primary osteoplasty. Autogenous rib bone was used and the grafted bone was covered by means of premaxillary and vomer flap nasally and by advanced lip mucosa orally. Following surgery, orthopedic treatment by use of activator-type appliances was carried out. The bone transformation was followed up. Several years later, some aspects of the paper have changed, and more

operative procedures have been developed to facilitate bone grafting, including even the hard palate. Advances and common interest in that kind of treatment are obvious nowadays, but principle and philosophy remain, as well as the fact that the final evaluation of the results of the permanent dentition are still not available yet.

In the following paper, Skoog describes his technique for lip repair which seems to be a combination of the lateral flap transfer used in the techniques of Tennison and Millard. A similar procedure on the base of the Le Mesurier lip incision was described by Trauner. Skoog placed emphasis on the fact that his technique is indicated for unilateral as well as for bilateral cleft lip and is especially useful for wide clefts. The post-operative photographic results are excellent. The reviewer is concerned, however, about the esthetic outlook in bilateral clefts, which must be even more disappointing than that of a bilateral Tennison or Le Mesurier if the scars are definitely visible. The trend goes to an uninterrupted scarline matching the natural philtrum border in bilateral clefts whereas unilateral clefts may benefit from the author's technique.

Immenkamp reviews his late results of the Hagedorn-Le Mesurier operation in complete clefts. He calls special attention to the problem of reconstructing the nostril. By extensive subcutaneous scissor dissection and vertical incision to divide the lateral nasal mucosa from the lower ala a satisfying roundness shall be gained without tension. The reviewer does not advocate too much surgery involving the alar cartilage in infants, since we have seen growth arrest of the nostril a few years later.

Rehrmann reports on the operative technique of bilateral lip clefts, preferring a Hagedorn-Le Mesurier procedure. If the prolabium is small, a two-stage repair is recommended. The procedure can be used in secondary lip repair, too. Perhaps this would be its best indication.

Widmaier describes experiences with the Le Mesurier operation which often results in lips which are too long on the cleft side by disproportional growth of the quadrangular flap. The Millard technique is favored and Le Mesurier's operation is limited to secondary repair of both uni- and bilateral lips. It should be pointed out, however, that little triangular flaps of the Tennison type do not show the tendency of resulting in lips which are too long.

Trauner deals with the problem of lip and nasal corrections in operated clefts. Definitive results require often a series of individual corrections. In the lip, the Mesurier incision together with an original Z-plasty at the nasal base or the Abbe operation is mainly used. Another original technique is mentioned, by which submucous resected septum cartilage is transplanted to stabilize and to heighten the anterior septum border.

Schmid reports on the use of composite grafts after Konig. It seems doubtful whether this method has a good chance to close large fistulae of the anterior palate, but for reconstruction of the columella or the ala, it is tremendously valuable.

Gelbke discusses, in general, operative possibilities in velopharyngeal incompetence. He is right to point out that pushback procedures are of little value if not combined with a pharyngeal flap which prevents the anterior displacement post-operatively. The indication is limited to scar and immobile soft palate. If there is velar mobility, the pharyngoplasty as described by Hynes is favored. No special observations are mentioned as to the very important question of the possibility of placing the mucomuscular ridge high enough at the posterior pharyngeal wall. Contributions on speech problems are of little value if only surgical thoughts are discussed and the evaluation of the surgical results by speech pathologists is omitted.

Finally, Berndorfer reports on unusual malformations of the face. These rare facial malformations cannot be explained only by noxious influence during development which in the opinion of many investigators determines the malformation syndrome. The author is to be assisted in his statement that rather both the time and type of a noxious influence play the significant role.

This book, reviewed six years after publication, reflects what has been regarded as advances at that time. The great number of different authors have contributed papers of high quality and are well illustrated. The real value of this volume is being part of the yearbook series which covers the whole field of maxillofacial and facial plastic surgery brought up to Volume Ten now. The editor (Schuchardt) is to be congratulated for the high goals which he obviously has set in compiling the yearbook. Volume Five certainly will have readers who find the text rewarding reading.

RUDOLF K. STELLMACH, D.D.S., M.D.

*Medical Academy
of Dusseldorf
Germany*

MCDONALD, EUGENE T., *Articulation Testing and Treatment: A Sensory-Motor Approach*. Pittsburgh: Stanwix House, Inc., 1964. Pp. 189. \$5.50.

The first paragraph of the author's introduction provides an excellent overview of his book. He writes:

The purpose of this book is sixfold: first, to develop a point of view about the nature and development of normal articulation which is based on an integration of pertinent research data, evaluated clinical experience, and logic; second, to use this point of view to explain the nature and development of misarticulation; third, to present a method of assessing articulation which is consistent with this point of view about the nature of normal and defective articulation; fourth, to outline a therapeutic approach which derives from the assessment and has its rationale in the description of normal and defective articulatory processes; fifth, to present a frame of reference about articulation within which the therapist or the clinician can evaluate the

techniques of diagnosis and therapy which he employs; sixth, to discuss the implications of this point of view for the design of research in the area of articulation.

Thus, this book presents a scholarly discourse concerning articulation and serves as a manual for a group of articulation tests. The chapter topics coincide with the author's six purposes. The first chapter contains writings that influenced the development of McDonald's point of view about articulation. The authors of these materials which were published or presented earlier are R. H. Stetson, Hide Shohara, J. Curtis, D. C. Spriestersbach, and G. Fairbanks. Among the topics that influenced McDonald are the importance of context and movement pattern and of transition from sound to sound to articulation, simultaneity of articulatory movements, and the importance of kinesthetic cues to the monitoring of one's own speech.

Chapter 2, which is concerned with the nature of articulation, gives special emphasis to three kinds of movement (fixed, controlled, and ballistic), to discussion of muscle function in the arresting and releasing of syllables, and to the relationship of articulatory movements to the syllable pulse. Chapter 3, *The Nature and Development of Defective Articulation*, includes discussion of etiology of articulation disorder in terms of combinations of contributing factors, not one of which by itself could cause a disorder. Other topics include the inconsistency of articulatory errors and the development of perceptual and motor skills necessary for normal articulation.

Chapter 4 describes the articulation tests that have been developed to assess use of various phonemes in a variety of contexts. Both picture and sentence tests have been prepared. The chapter reports reliability data pertaining to these tests which may be purchased from Stanwix House, Inc.

Chapter 5 concerns articulation remediation. The approach is compatible with the author's tests and viewpoint. General principles include a) heightening his (the client's) responsiveness to the patterns of auditory, proprioceptive, and tactile sensations associated with the overlapping ballistic movements of speech, b) reinforcing the child's correct articulation of his error sound, and c) facilitating the correct articulation of the error sound in systematically varied phonetic contexts.

Emphasis is also given to client responsibility for his own speech training program. Specific techniques are discussed. The remedial program makes use of contexts in which the client can produce his goal sounds correctly and the development of habitual correct usage through training. This method may be contrasted with approaches that recommend a period of auditory perceptual training prior to any attempt to elicit sound productions.

The final chapter is concerned with implications for research. The re-

viewer has found McDonald's concepts useful for the day-to-day examination of articulation change in response to remedial work.

The role of kinesthesia in articulation may be of special interest to the members of the American Cleft Palate Association. Literature concerning muscle spindles and Golgi tendon organs, the receptors for kinesthesia, suggests they do not mediate conscious sensation so far as lips, tongue, and palate are concerned. This point is not critical to McDonald's presentation, since touch receptors could provide the somesthetic sensation important to his work. However, the back of the mouth is less well endowed with touch receptors than is the front of the mouth, and it is possible that attempts to teach clients to make conscious movements of the palate through somesthetic monitoring ask the physiologically impossible of the client. McDonald's remedial work focuses on the development of articulatory movements rather than on nonspeech movements and increases the client's awareness of things that he can do. McDonald acknowledges the controversy regarding mechanisms of kinesthesia or proprioception and is currently involved in research concerning kinesthesia.

This book will greatly influence remedial work and research concerning articulation.

RALPH L. SHELTON, JR., PH.D.

*Hearing and Speech Department
University of Kansas Medical Center
Kansas City, Kansas 66103*

NECROLOGY

Wendell Johnson: August 29, 1965

ABSTRACTS

Editor

Kenneth R. Lutz, Ph.D.

Hratch A. Abrahamian,
D.D.S.
Franklin L. Ashley, M.D.
Walter J. Benavent, M.D.

Doris P. Bradley, Ph.D.
Bard Cosman, M.D.
Robert L. Harding, M.D.
Charles J. Klim, Ph.D.

William K. Lindsay, M.D.
Joseph Luban, D.D.S.
Gene R. Powers, Ph.D.
J. Douglas Noll, Ph.D.

International Editor

Michael L. Lewin, M.D.

F. Doubek (Professor Doc-
tor) Graz, Austria
Giuseppe Francesconi, M.D.
Milano, Italy
Bjorn Fritzel, Med. Lic.
Göteborg, Sweden
Thomas Gibson, M.D.,
F.R.C.S. Glasgow, Scot-
land
V. Karfik (Professor Doctor)
Prague, Czechoslovakia
F. de Souza Lapa, M.D.
Sao Paulo, Brazil
Junji Machida, D.D.S. Osaka
City, Japan
W. Donald MacLennan,
F.D.S., H.D.D. West Lo-
thian, Scotland

Borel Maisonnay (Madame)
Paris, France
R. J. Maneksha, M.D. Bom-
bay, India
Tadashi Miyazaki, D.D.S.
Osaka, Japan
Paulo Morgante, M.D. Sao
Paulo, Brazil
Muriel Morley, M.S.C.,
F.C.S.C. Rothbury, Nor-
thumberland, England
Karl Nordin, D.D.S. Stock-
holm, Sweden
Bengt O Nylén, M.D. Stock-
holm, Sweden

Josef Penkava, M.D. Brno,
Czechoslovakia
Pierre Petit, M.D. Paris,
France
Jean Psaume (Docteur)
Paris, France
Eduard Schmid, M.D.
Stuttgart, West Germany
Victor Spina, M.D. Sao
Paulo, Brazil
Yoshio Watanabe, D.D.S.,
M.D. Okayama City,
Japan
J. Vrticka, M.D. Prague,
Czechoslovakia

Santoni-Rogiu, P., Considerazioni sul
trattamento della cheiloschisi secondo
Skoog (Considerations on the treat-
ment of Skoog's method on cleft lip).
Minerva Chir., 20, 334, 1965.

After a brief examination of the usual
procedures of repairing the unilateral cleft
lip, the author describes Skoog's method
which utilizes two skin flaps, both traced
on the external side of the clefts. This
method, as the author states, offers nu-
merous and profitable advantages. In fact,
a good lengthening of the lip and a com-
plete repair of the anatomic lines are ob-

tained; the lower triangular flap, which
is transferred from the outside towards
the inside, allows the restoration of the
lip border according to the operator's
aesthetical taste. Afterwards, the technical
procedure is explained in detail and illus-
trated with clearly exemplified sketches,
thus enabling everyone to understand the
method. The most advisable age to operate
should be about the second month of life,
as an early intervention, as the author
states, and should allow a good and spon-
taneous repair of the premaxillary bone.
Then the author reports his own results

illustrated by many pictures, which let us see good post-operative results with appreciable repair of the vermilion border. This method is advised for the correction of the bilateral cleft lip as well, in which case it is necessary to perform the surgical operation in two stages so that the blood supply and the anatomical structures of the filter and of the lip tubercle are not injured. We think this paper worthy of being known and carefully considered in that it describes a new and modern technical procedure which can interest all those who tend to reach that more and more desirable perfection of repair. (Francesconi)

Hiroto, I., Hirano, M., and Umeno, M., Cineradiographic study on malarticulation of cleft palate speakers. *Otol. Rhinol. Laryngol. Clinic*, 56, 516-530, 1963.

The movements of the soft palate and the base of the tongue during production of isolated Japanese sounds were observed on four subjects with operated cleft palates using cineradiography with image-intensifier. The movements were analyzed according to time. The movements of the soft palate were found to begin earlier than that of the base of the tongue. The maximum elevation of the soft palate occurred after the onset of the phonation. The movements of the tongue base began earlier in vowels and in voiceless consonants than in nasals or in voiced consonants. Compared with the normals, incompetency of the nasopharyngeal sphincter was also noticed in the experimental group. (Machida)

Ohashi, Y., Anomalies of teeth and sites of the alveolar cleft in patients with lip, alveolar and palatal cleft. *J. Japanese Stomatol. Soc.*, 13, 401-422, 1964.

Two hundred sixty cases with lip, alveolar, and palatal clefts were examined clinically and roentgenographically. The

mean ages of the subjects were 11 years and two months. Anomalies of the teeth were found in 122 cases (49.6% of the subjects) missing in 71 cases, supernumerous in 26 cases, fused in 19 cases, impacted in four cases, and overretained deciduous teeth in two cases. Most of the anomalies were found in the maxillary lateral incisors, which bore 59.7% of the anomalies. He concluded that the alveolar cleft in the maxilla might occur at the site as to divide the germ of the lateral incisor and that the maldevelopment of the alveolar bone along the cleft might disturb the development of the dividing teeth. (Michida)

Skoog, T., The pharyngeal flap operation in cleft palate, a clinical study of eighty-two cases. *Brit. J. plastic Surg.*, 18, 265-282, 1965.

This study was undertaken to compare the results of the two main variants of pharyngeal flaps, those based superiorly (49 cases) and those based inferiorly (33 cases). In both instances, if the secondary defect on the pharynx was left raw, delayed changes resulted as scar tissue healing progressed. With inferiorly based flaps these are beneficial insofar as the attached palate tends to be drawn *upwards* and backwards. With superiorly based flaps, however, the downward pull of the scar tissue band depresses the soft palate below the optimum level for velopharyngeal closure, and a method of primary closure of the pharyngeal defect with two additional local flaps is described. The review period covered twelve years and the average follow-up interval was four years and ten months. No significant differences were revealed between the two groups of patients; if operated before ten years of age, all had normal speech, between ten and 20 years, 97%, and over 20 years, 77% had acceptable intelligibility. The results depended more on the degree of mobility of the soft palate than the design of the pharyngeal flap. The inferiorly

based flap is technically easier and the main indications for the superiorly based flap is an excessive amount of adenoid tissue which will not permit sufficient length if the flap is based below. The indications, operative technique, the anatomical changes, and the methods of investigation are fully discussed. (Gibson)

Davies, D., The repair of the unilateral cleft lip. *Brit. J. plastic Surg.*, 18, 254-264, 1965.

During the past ten years, over 250 cases of unilateral cleft lips have been repaired with two equal flaps of a pure Z-plasty. The author believes that this is the logical conclusion of earlier modifications of local flap repair and it has been

evolved in order to provide a simple technique which will give consistently good results. The Z-plasty is equal-limbed and equi-angular (60°) and design is simplified by the use of a set of triangular markers whose side varies from 1 cm to 0.58 cm, the range found to be required in practice. A lengthening of 75% is assumed, and when the height of the normal side is known, the appropriate marker can be chosen. The Z-plasty components are separated by the cleft and it is essential that the split central limbs should be kept parallel. In some instances, particularly in incomplete clefts, there is an excess of length on the normal side, and a small, full, thick triangle of lip is excised just below the nostril to equalize this. (Gibson)

REGISTRY OF CURRENT RESEARCH PROGRAMS

The Registry will be maintained in subsequent issues of the *Journal*. Currently, the major source of information is the Bio-Sciences Information Exchange; however, other sources are invited to contribute. Descriptions of research programs to be listed with the Registry should be sent to the Editor.

Items are: Name of project; supporting agency; name of principal investigator with degrees; academic rank, institution, and address; and summary of project.

Growth of the mandible in children with posterior cleft palate: A serial cephalometric study (NIH).

Peter J. Coccaro, D.D.S., National Institute of Dental Research, National Institutes of Health, Bethesda, Maryland.

Summary: The purpose of this study is a) to analyze, longitudinally, the changes discernable in ramus height, body length, ramus width, and total length of the mandible in children with a posterior cleft palate, b) to determine the growth rate and growth pattern of the mandible in posterior cleft palate children during the period between three months and six years of age, c) to compare mandibular growth in children having posterior palatal clefts with normal children, and d) to evaluate the important role that growth of the mandible plays in altering facial profile in cleft palate children.

A survey of speech disorders of persons with cleft palate (NIH). *Yasuaki Takagi*, M.D., National Institute of Dental Research, National Institutes of Health, Bethesda, Maryland.

Summary: The purpose of this study is to determine the incidence of various speech disorders within a cleft palate population.

Vitamins and congenital malformations (NIH). *Sidney Q. Cohan*,

M.D., New York University Medical Center, 550 First Avenue, New York City.

Summary: The effect of transplacentally acquired tetracycline on the developing rat fetal skeleton will be investigated by histochemical study of 14 to 18 day tetracycline treated rat feti. Twelve exprematures who received tetracycline during the first month of life are being followed for tetracycline deposition in the deciduous teeth. Skeletal growth will also be evaluated. The hypothesis that excess vitamin A exerts its teratogenic effect by release of placental and/or fetal lysosome enzymes is being explored. Vitamin A treated placentas are being assayed for lysosome activity. Indirect evidence in the fetus will be explored by histochemical techniques (acid phosphatase, DNase, RNase, S35 deposition). Attempts are being made to establish a reproducible incidence of vinacaleukoblastine teratogenicity in the rat. If successful, investigation of a possible glutamine inhibition of vinecablastine teratogenicity will be explored.

Studies of multiple congenital abnormalities (NIH). *I. W. Monie*, M.B., Ch.B., University of California Medical Center, Berkeley 4, California.

Summary: A variety of teratogenic agents will be employed singly or in combination to produce congenital abnormalities in rat fetuses. The type and incidence of malformations will be varied according

to the nature of the agent and the time of pregnancy when it is employed. Based on previous investigative experience, such teratogenic agents as folic acid (PGA) deficiency, trypan blue, chlorambucil, and methyl salicylate will be used to produce abnormalities of the nervous, urogenital, and cardiovascular systems in order that specific abnormalities can be studied in early and subsequent stages. Particular attention will be directed to hydrocephaly, retarded cerebral development, hydro-nephrosis, and abnormalities of the great vessels and heart chambers; all of these have already been produced by the agents which will be employed. Methods used will entail the study of serially sectioned rat embryos of all ages, the use of special staining and histochemical techniques, and wax plate reconstruction.

Experimental production of congenital malformations in mammals as a tool of teratologic research (NIH). *Josef Warkany*, M.D., Children's Hospital Research Foundation, Cincinnati, Ohio 45229.

Summary: Experimental production of congenital malformations in mammals serves as a tool of teratologic research by making possible studies concerning the morphogenesis of and mechanisms leading to prenatal structural defects. A variety of teratogens are used in rats, mice, and rabbits to obtain certain types of malformations. Some of the teratogens are given to mice of inbred strains to analyze the role of environmental and genetic factors in the etiology of malformation. In rats and mice the morphogenesis of hydrocephalus, spina bifida, transposition of the great vessels, and other malformations is under study. The work is being extended to chromosome studies of embryonic tissues injured by teratogens.

Studies on congenital defects in folic acid deficiency (NIH). *Lura M.*

Morse, University of Minnesota, St. Paul, Minnesota.

Summary: This study is concerned with the mechanisms of action of folic acid deficiency in the production of congenital abnormalities in rats. The folic acid deficiency is induced by folic acid antagonists. The antagonists include aminopterin, x-methyl folic acid, and Daraprim. Abnormalities of varying degree and incidence can be produced with these three antagonists administered by injection on the 10th to 12th day of the pregnancy in the albino rat. Determinations of DNA, RNA, and nitrogen are being carried out on the fetal rat liver. The teratogenic effects of these agents may be reversed with folic acid administered about one hour prior to the injection of the drug in question. The effect of various purine and pyrimidine ribosides similarly administered is being studied.

Cinefluorographic evaluation of pharyngeal flap operations (Easter Seal Research Foundation). *Harry M. Blackfield*, M.D., University of California School of Medicine, San Francisco, California.

Summary: At the present time there are 72 patients under the follow-up study in whom pharyngeal flap operations have been performed. This group includes 33 patients on whom surgery was performed in the period between 1959 and 1961. As a result of our evaluation of these cases, we have made certain technical modifications in the procedure. These changes do not alter the basic concept of the operation but provide technical facility, and it is hoped, further improvement in the functional results. The modified operation was performed on 20 patients in 1962 and 1963. We anticipate a continuing surgical load of approximately 20 cases in 1964. The cases include patients with a cleft palate and those with velopharyngeal dysfunction in the absence of an overt cleft

of the palate. The follow-up study includes a pre-operative base line evaluation with cinefluorography. After surgery, re-examination by cinefluorography is performed within a few months and on an annual basis thereafter. Fifty-four of the 73 operated cases have been examined one or more times since surgery. Twenty-one of the cases have been analyzed via frame-by-frame tracings. In the continuing study, the more recently operated patients will be examined and studied with cinefluorography. Appropriate analysis and measurements, as have been applied to the earlier case, will be utilized in evaluating the more recently operated patients. It is anticipated that the data can be employed for several purposes: a) The addition of information regarding the physiology of the velopharyngeal area during speech production, and b) additional studies regarding the action of the pharyngeal flap, which added to the data accumulated from the earlier cases, will provide films of patients undergoing pharyngeal flap surgery with subsequent follow-up studies.

Maxillary collapse and tongue function in cleft palate (NIH). *Kenneth R. Lutz*, Ph.D., Loma Linda University, Loma Linda, California.

Summary: It is the purpose of the study to investigate the relationship of tongue function and the occurrence of maxillary collapse in subjects with cleft palate. Patterns of tongue function and forces exerted against the palate and maxillary dental arches are determined electronically and recorded. Cephalometric radiographs and plaster casts are employed in the assessment of maxillary collapse. Results obtained in the assessment of the cleft palate subjects are compared with measures of the same parameters from a group of noncleft palate controls.

Facial growth and dentition in cleft palate subjects (NIH). *Robert F.*

Hagerty, M.D., Medical College of South Carolina, 80 Barre Street, Charleston, South Carolina.

Summary: The objectives of our study continue as before with evaluation of facial growth in its relation to surgery, of the indicatives, effectiveness, and long-term results of cartilage pharyngoplasty, palatal bar, and orthopedic-surgical techniques. As a result of our recently developed methods of palatal measurement, which we plan to further refine, satisfactory yardsticks are at hand for more objective results.

Effect of teratogenic diet on in vitro palatal fusion (NIH). *Robert D. Gibson*, Department of Pharmacology-Dentistry and Pharmacy, University of Nebraska, Lincoln, Nebraska 68508.

Summary: This study will provide information as to a) the effect upon fusion rates of normal tissues by the introduction of teratogenetic agents into their supportive environment while in culture, b) the effect upon process movement (that is, proliferation and growth) by teratogenetic agents *in utero* and in culture, c) the effect of isolating potential cleft palate tissues from the influences of tongue, head, and process position, and d) possible indirect evidence as to the mode(s) and site(s) of effect by which teratogens produce cleft palate.

Physiological studies on congenital deformity in mice (U.S. Atomic Energy Commission). *Meredith N. Runner*, Department of Biology, University of Colorado, Boulder, Colorado.

Summary: The objectives will be to continue the investigation on interaction of pairs of teratogenic agents to assess potentiation, neutrality, or interference, and to investigate the extent to which the

chick embryo can provide and a test system for studying premorphogenetic effects of radiation and radiomimetic agents. The background for the research stems from our previous work that has led to the conclusions a) that teratogenic agents substantiate a concept of genetic environmental interactions, b) that additive agents have led to a concept of multiple environmental factors in congenital deformity, c) that convergence, protection, and nonadditive results have led to a theory that carbohydrate metabolism in the embryo is critical for normal morphogenesis, and d) that radiation actually protects embryos from certain deformities. The plan is to continue coding morphological variants in experimental mice and prepare the data for computer handling. Six treatments, singly and in all combinations provide 21 possible groups to be analyzed. Comparable experiments will be done with the chick embryo where earlier end points and metabolic studies will be done with radio-isotopes and electrophoresis to study cellular degeneration, cellular syntheses, and carbohydrate enzymes in an effort to relate early post-irradiation changes to abnormal morphogenesis.

Cortisone and carbutamide induced congenital cleft palate in rabbits (Veterans Administration). *Carlos E. Nasjleti*, D.D.S., Veterans Administration Hospital, 2215 Fuller Road, Ann Arbor, Michigan.

Summary: Experiments with vitamin and hormone excesses administered to the pregnant female have shown that congenital malformations can arise in mammalian embryos as a consequence of their administration. Cortisone, when administered in massive doses to pregnant mice, can cause cleft palate. DeCosta and Abelman studied the effects of cortisone on

pregnancy in the rabbit, and no cleft palates were noted following cortisone treatment: 15 mgm injected daily. Currier and Colonge and Robson and Sharaf found that cortisone has a noxious effect on pregnancy of rabbits, but they did not observe any congenital defects. Fainstat has proved that cortisone is teratogenic in at least one species other than mice. In his study, rabbits of commercial origin were given 25 to 30 mgm of cortisone intramuscularly per day for four successive days, beginning the 14th day of gestation. Of 35 offspring, 17 had cleft palate. Tuchman-Duplessis and Mercier-Parot had produced malformations in mice, rats, and rabbit embryos, by oral administration of carbutamide during pregnancy. In the mouse, as in the rat, mostly eye malformations were found. In contrast the anomalies observed in the rabbit were heterogeneous. These investigators were interested in a general evaluation of cortisone and carbutamide as being teratogenic. Consequently, no attention was given to the study of the physiologic mechanism involved in the induction of the cleft palate per se. We therefore intend to reproduce the cleft palate in rabbits by separate treatment with cortisone and carbutamide. Evaluation of this treatment will be done in several ways: a) Data concerning the number of resorptions and deformities of any kind will be made. b) Weight of embryos will be recorded and size measured by using the standard grid. c) Gross examination of all specimens and photography of defects will be done, as well as radiographs of skeletal deformities. d) Histochemical treatment of the tissues will be done, especially of the palatal area. It is hoped to determine the comparative effect of the two chemicals on the facial growth of the prenatal rabbit, as well as possible changes in connective tissue cells, fibers, and ground substance of the palatal structures.

ANNOUNCEMENTS

Regarding 1966 in Mexico City...

a) April 14, 15, and 16 at the Maria Isabel (headquarters) and at the Del Prado.

b) Planning for the meeting continues under the leadership of Dr. Elise Hahn and Mr. Robert Sloan. Inquiries regarding the program or local arrangements should be sent to Dr. Hahn or Mr. Sloan, respectively.

c) Since Mexico City is considered foreign travel by the National Institutes of Health, Dr. McWilliams has made inquiry to NIDR regarding whether a 'blanket clearance' might be made for attendance by research grant personnel. She has been advised that blanket clearance is not considered an appropriate action and that principal investigators should request this foreign travel in their application for fiscal year 1966 funds or, presumably, at any time (if application for 1966 funds has been made).

Graduate Fellowships in Cleft Palate Therapy and Rehabilitation, supported by the United States Public Health Service, are available to qualified applicants. All applicants must be U. S. citizens. 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 \$5,000 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 Dentistry, 4001 Spruce Street, Philadelphia 4, Pennsylvania.

Comments with regard to changes, corrections, or additions to the 'Classification of Cleft Lip and Cleft Palate' will be welcomed by the Nomenclature Committee of the Association. Kindly send all correspondence to Dr. William R. Harkins, Fulton Building, Osceola Mill, Pennsylvania.

Inquiries and applications for membership to the Association should

be sent to the membership chairman, Dr. Gene R. Powers, Speech and Hearing Clinic, University of Connecticut, Storrs, Connecticut 06268.

The following professional meetings are announced:

- American Academy of Pediatrics, April 25 to 27, 1966, at Montreal, Canada.
- European Rhinologic Society, Second Congress, June 30 to July 2, 1966, at Bordeaux, France, and July 4 to 6, 1966, at Leiden, Netherlands.
- International Congress of Radiation Research, June 26 to July 2, 1966, at Cortina d'Ampezzo, Italy.
- International Congress for Child Psychiatry, July 24 to 29, 1966, at Edinburgh, Scotland.
- American Medical Association, June 26 to 30, 1966, at Chicago.
- American College of Radiology, February 8 to 12, 1966, at Chicago.
- American Surgical Association, March 23 to 25, 1966, at Boca Raton, Florida.
- American Academy of Facial Plastic and Reconstructive Surgery, Inc., April 14 to 16, 1966, at San Juan, Puerto Rico.
- American Association of Plastic Surgeons, April 27 to 30, 1966, at Cleveland.
- American Laryngological, Rhinological, and Otological Society, April 20 to 22, 1966, at San Juan, Puerto Rico.
- Society of Head and Neck Surgeons, April 24 to 26, 1966, at Denver.
- Association of American Physicians, May 3 to 4, 1966, at Atlantic City.
-

Dr. John Marquis Converse, Lawrence D. Bell Professor of Plastic Surgery, New York University School of Medicine and Director of the Institute of Reconstructive Plastic Surgery, New York University Medical Center, has been appointed by the Surgeon General to a four-year term on the National Advisory Dental Research Council of the Public Health Service, U. S. Department of Health, Education, and Welfare. As a member of the Council, Dr. Converse will advise and make recommendations to the Surgeon General on research and training grants and fellowships to be awarded by the Public Health Service from funds appropriated to the National Institute of Dental Research, one of the nine Institutes which comprise the National Institutes of Health.

The Israel Dental Association announces the 54th Annual Session of the Federation Dentaire Internationale, July 10 to 17, 1966, at the Tel

Aviv Hilton Hotel. The program will be centered on problems in preventive dentistry and periodontia and will include discussions by prominent experts on new concepts in dental materials and equipment. Information regarding the Session can be obtained from Peltours, P. O. Vox 394, 28 Ahad Ha'am Street, Tel Aviv, Israel.

The First International Congress of Dentistry-Stomatology is announced, to be held under the auspices of the Espirito Santo Section of the Brazilian Association of Odontology. The Congress is to be convened February 6 to 12, 1966, in Vitori—Espirito Santo, Brasil. Information may be obtained from Dr. Eloy Borgo, Centre de Saúde, Rua Cais São Francisco, Caixa Postal n.º 821.

The University of Alabama School of Dentistry announces a three-year training program in Dental Radiology leading to a Master of Science degree. Support for one qualified individual at a first year stipend of \$5,000 per annum plus \$500.00 for each dependent is available through a National Institute of Dental Research training grant. Tuition charges and certain other miscellaneous costs are also grant supported. Applicants are not restricted to those having a dental degree. Inquiries and applications should be addressed to Dr. Arthur H. Weuhrmann, University of Alabama Medical Center, School of Dentistry, Birmingham, Alabama 35233. Individuals accepted into the program must be approved by both the School of Dentistry and the Graduate School of the University.

Erratum

The seventh line of the third paragraph on page 353 of the Ruess, Pruzansky, and Lis paper in the October 1965 *Cleft Palate Journal* was a reprint of the line two spaces above. The repeated line should have read: *on the basis of available reports for these 15 patients, seven are reported to.* The editors apologize to the authors for the error.

OFFICERS OF THE ASSOCIATION, 1965-1966

President.....Peter Randall, M.D. Philadelphia, Pennsylvania
President-Elect.....Mohammad Mazaheri, D.D.S. Lancaster, Pennsylvania
Past President.....Betty Jane McWilliams, Ph.D. Pittsburgh, Pennsylvania
Vice-President.....Elise Hahn, Ph.D. Santa Monica, California
Vice-President-Elect.....John W. Curtin, M.D. Chicago, Illinois
Secretary-Treasurer.....Kenneth R. Bzoch, Ph.D. (1968) Gainesville, Florida
Editor.....Hughlett L. Morris, Ph.D. (1967) Iowa City, Iowa

COUNCIL MEMBERS OF THE ASSOCIATION 1965-1966

The above officers and

Norman R. A. Alley, D.D.S. (1966), Coral Gables, Florida
Lester M. Cramer, M.D. (1967), Rochester, New York
Michael L. Lewin, M.D. (1968), New York, New York
Ross H. Musgrave, M.D. (1967), Pittsburgh, Pennsylvania
William H. Olin, D.D.S. (1968), Iowa City, Iowa
Joanne D. Subtelny, Ph.D. (1966), Rochester, New York

COMMITTEES OF THE ASSOCIATION 1964-1965

Budget

Kenneth R. Bzoch, Ph.D. (Chairman)
Hughlett L. Morris, Ph.D.
Mohammad Mazaheri, D.D.S.
Charlotte G. Wells, Ph.D.

By-Laws

Asa J. Berlin, Ph.D. (Chairman)
Betty Jane McWilliams, Ph.D.
William H. Olin, D.D.S.
Richard B. Stark, M.D.

Honors and Awards

William R. Laney, D.M.D. (Chairman)
Eugene T. McDonald, Ed.D.
Samuel Pruzansky, D.D.S.
D. Ralph Millard, Jr., M.D.
George F. Crikelair, M.D.
Margaret C. Byrne, Ph.D.

Ethics and Professional Affairs

Herbert Koepp-Baker, Ph.D. (Chairman)
Richard C. Webster, M.D.
Donald M. Glover, M.D.
Stephen P. Forrest, D.D.S.

International Relations

Michael L. Lewin, M.D. (Chairman)
Lester M. Cramer, D.M.D., M.D.
Malcolm C. Johnston, D.D.S.
Benjamin B. Cantor, D.D.S.
Thomas D. Rees, M.D.
George H. Shames, Ph.D.
Mildred F. Berry, Ph.D.
David B. Coursin, M.D.

International Congress, 1969

Betty Jane McWilliams, Ph.D. (Chairman)
Sheldon W. Rosenstein, D.D.S.
Thomas R. Broadbent, M.D.
Donald W. Warren, D.D.S., Ph.D.
Michael L. Lewin, M.D.
Clark D. Starr, Ph.D.

Local Arrangements

Robert F. Sloan, B.A. (Chairman)
Fernando Monasterio, M.D. (Guest Co-Chairman)
Norman R. A. Alley, D.D.S.
Raymond O. Brauer, M.D.
Kenneth R. Bzoch, Ph.D.
Sanford Giansz, M.D.
Elise S. Hahn, Ph.D.
Morton S. Rosen, D.D.S.

Long Range Planning

Peter Randall, M.D. (Chairman)
Mohammad Mazaheri, D.D.S.
Elise S. Hahn, Ph.D.
Kenneth R. Bzoch, Ph.D.
Betty Jane McWilliams, Ph.D.
Hughlett L. Morris, Ph.D.
Ross H. Musgrave, M.D.
Charlotte G. Wells, Ph.D.

Membership

Gene R. Powers, Ph.D. (Chairman)
Edward F. Lis, M.D.
Galen W. Quinn, D.D.S.
H. Cameron Metz, Jr., D.D.S.
Verner V. Lindgren, M.D.
Ralph L. Shelton, Jr., Ph.D.

Nomenclature

Nicholas G. Georgiade, M.D. (Chairman)
Bertram S. Kraus, Ph.D.
William R. Harkins, D.D.S.
Kenneth R. Bzoch, Ph.D.

Nominating

Ross H. Musgrave, M.D. (Chairman)
Duane C. Priestersbach, Ph.D.
Howard Aduss, D.D.S.
James C. Shanks, Ph.D.
Mohammad Mazaheri, D.D.S.

Program

Elise S. Hahn, Ph.D. (Chairman)
A. R. Serrano, M.D. (Guest Co-Chairman)
Ernest H. Hixon, D.D.S.
Lester M. Cramer, D.M.D., M.D.
Joanne D. Subtelny, Ph.D.
Charles R. Elliott, Ph.D.
Sidney I. Silverman, D.D.S.
Robert F. Sloan, B.A.
John W. Curtin, M.D.
Samuel Berkowitz, D.D.S.

Public Relations

Walter J. Benavent, M.D. (Chairman)
A. R. Serrano, M.D. (Guest Co-Chairman)
Ernest H. Hixon, D.D.S.
Richard C. Schultz, M.D.
Kenneth R. Lutz, Ph.D.

Time and Place

Francis W. Masters, M.D. (Chairman)
Harry Z. Roch, D.D.S.
Donald T. Counihan, Ph.D.
Eugene Gottlieb, M.D.
Doris P. Bradley, Ph.D.

AMERICAN CLEFT PALATE ASSOCIATION

Information for Applying for Membership

The Association was organized in 1940 with the following objectives:

1. To encourage scientific research in the causes of cleft lip and palate.
2. To promote the science and art of rehabilitation of persons with cleft palate and associated deformities.
3. To encourage cooperation among, and stimulation of, those specialists interested in the rehabilitation of cleft palate persons.
4. To stimulate public interest in, and support of, the rehabilitation of cleft palate persons.

The Association publishes the *Cleft Palate Journal* quarterly. The Association's Annual Meeting includes sessions devoted to the presentation of papers in medicine, dentistry, speech, and related areas concerning the problems in individuals with cleft lips and palates.

To be qualified as a member of the Association, the applicant must be in good standing in the professional organization representing his major or clinical orientation. He must be accredited in his professional field, and he must have displayed an interest in the rehabilitation of cleft palate persons. The above statement has been interpreted to mean that those applicants trained in Speech Pathology and Audiology must hold at least basic certification from the American Speech and Hearing Association at the time of the application.

The person shown as sponsor on the application must be a member of the Association and must write a letter attesting to the fact that the applicant is eligible for membership.

Send applications or requests for further information to:

KENNETH R. BZUCH, PH.D.
American Cleft Palate Association
Department of Communicative Disorders
University of Florida
Gainesville, Florida 32603