BOOK REVIEW

BOSMA, JAMES, *Oral Sensation and Preception, Fourth Symposium,* DHEW Publication No. (NIH) 73-546, 419 pages, 1973

This text contains the papers presented at the Fourth Symposium on Oral Sensation and Perception sponsored by the National Institute of Dental Research. The symposium devoted its transactions to the development of sensorimotor functions in the fetus and infant. An important body of fundamental knowledge is presented which has been slow to appear in the clinical sciences. The mouth and pharynx is an important site of affluent experience with central representation. This may be important in the acquisition of expressive speech, environmental linkages and even spatial relations of oral-pharyngeal structures. This book will be of interest to a variety of disciplines.

EDITOR

ABSTRACTS

Barrow, M.V., and A.J. Steffek, Teratogenic and other embryotoxic effects of β-aminopropionitrile in rats. *Teratology, 10,* 165-172, 1974.

Increased resorption rates and decreased fetal weight were produced by intubating pregnant rats with various single (3500-4000 mg/kg) or multiple (2500-3000 mg/kg) doses of β-aminopropionitrile (BAPN) during days 8-17 of gestation. The most embryotoxic gestational intervals were those that included day 15. Resorption (55%) and ectocardia and/or gastroschisis (16%) resulted when 2500 mg/kg BAPN was administered on days 14-15, whereas no gross congential malformations occurred when BAPN was administered before day 14. Higher doses of BAPN, such as 5000 mg/kg, resulted mainly in fetal resorptions; 2500 mg/kg or greater on day 16 caused only cleft palate in most fetuses. Severe degrees of kyphoscoliosis, bony curvatures, and exostoses at muscle-insertion sites were observed when BAPN was given after day 16. The pathogenesis of these malformations is compatible with the known biochemical effect of BAPN-inhibition of crosslinking of both collagen and elsatin-and in doing so: (a) could decrease the tensile strength of the anterior chest wall or abdominal wall to produce ectocardia and/or gastroschisis; (b) interfere with palate closure; and (c) produce osteolathyritic effects late in gestation which resemble the skeletal effects caused postnatally in young weanling animals this agent. (Authors' Summary: Lass)

Beaudoin, A. R., Teratogenicity of sodium arsenate in rats. *Teratology, 10,* 153–158, 1974.

When the author injected pregnant Wistar rats once ip with various doses of sodium arsenate

at one of days 7–12 of gestation, he found that the embryolethal and teratogenic effects were dependent on dosage: 30 mg/kg produced optimal effects when injected on day 8, 9, or 10. One of the malformations produced by this drug is cleft lip. (Lass)

Bergland, O. and H. Borchgrevink, The role of the nasal septum in mid-facial growth in man elucidated by the maxillary development in certain types of facial clefts. *Scand. J. Plast. & Reconstr. Surg. 8,* 42, 1974.

In this paper from Oslo, Norway, Bergland (orthodontist) and Borchgrevink (plastic surgeon) present a preliminary study of four cases of a rare cleft variant, viz. bilateral clefts of the primary palate in combination with an apparently normal secondary palate. In two infant cases a complete disjunction between the nasal septum and the clinically normal secondary palate has been proved presurgically. In two adult cases in which no hard tissue junction between the nasal septum and the secondary palate could be ascertained by tomography, the occlusal development and facial growth appear to have attained a final morphology well within the normal ranges of variation.

These four cases are taken as evidence that the nasal septum does not play any influential role in either pre- or in post-natal growth of the maxillary complex in man. The morphology of different variants of the described cleft deformity is discussed, as well as observations reported on in the literature by Veau, Coupe, Latham a.o. which appear to concern cases similar to the authors' xxx series and support their conclusions. (P. Fogh-Andersen)

Björk, A. and V. Skieller, Growth in width of the maxilla studied by the implant method. *Scand. J. Plast. & Reconstr. Surg. 8,* 25, 1974.

The transverse growth of the maxilla was studied radiographically by means of the metallic implant method. The authors' sample consisted of 9 boys without malocclusion of the teeth, investigated in the Institute of Orthodontics, Royal Dental College, Copenhagen. They had never received orthodontic treatment and were followed longitudinally by annual registration from 4 years of age, the majority of them until they were 18-20 years.

Sutural growth in the width of the maxilla was determined from frontal radiographs as the increase in the distance between metallic implants inserted at the lower aspect of the maxillary zygomatic process on each side. The shape of distance and velocity curves representing transverse growth in the median suture was similar to the shape of the curve representing the growth in body height, but showing a distinct puberal growth maximum.

The individual time of puberal maximum for the transverse sutural growth coincides with the time of puberal maximum of facial growth, measured from implants on profile radiographs. The individual time of growth completion in these sutures also coincided, occurring on an average of 17 years of age. The development in width of the maxillary dental arch, measured between the first molars, showed a small puberal growth spurt, but the total increase in width was only about one fourth of the sutural growth in width of the maxilla in this area.

To assess whether growth in the median suture was of the same amount throughout its length, metallic implants were also inserted anteriorly into the maxilla on each side of the median suture, on a level with the apices of the central incisors. With correction for differences in magnification on the frontal radiographs, the increase in distance between the laterally placed implants was three times greater than between the anterior implants for a corresponding period of time. This demonstrates that the sutural sepation of the two maxillae was greater posteriorly than anteriorly, and consequently they rotate in the transverse plane in relation to each other. The influence of the transverse rotation of the two maxillae on the development of the maxillary dental arch is discussed. (P. Fogh-Andersen)

Bluestone, C. D., Q. C., Beery, E. I., Cantekin, and J. L., Paradise, Eustachian tube ventilatory function in relation to cleft palate. *Ann. Otol., Rhinol. and Laryngol., 84,* 333-343, 1975.

The ventilatory function of the Eustachian tube was assessed in a group of infants and children with cleft palate, some of whom had received palatal repair. Those whose palates had been repaired were better able, in general, to equilibrate applied positive middle ear pressures than were those with open clefts. In many of the patients whose palates had been repaired, the results of Eustachian tube function studies were similar to those in normal subjects. Differences in Eustachian tube ventilatory function are assumed to be related to differences in tubal compliance. Excessive compliance probably results in, or exaggerates, functional Eustachian tube obstruction. Improvement in tubal function following palate repair is probably related to factors resulting in greater tubal stiffness. (Author's Abstract—Gregg)

Bryant, W. M. and K. I. Maull, Arteriovenous malformations of the mandible: Graduated surgical management. *Plast. Reconstru. Surg., 55,* 690-696, 1975.

Two cases of mandibular arteriovenous malformations managed by muscle embolization as well as surgery are presented and the literature reviewed. (Cosman)

Converse, J.M., Correction of the drooping lateral portion of the cleft lip following the LeMesurier repair. *Plast. Reconstr. Surg. 55,* 501-502, 1975.

The excessive vertical growth of the lateral portion of the lip repaired with a quadrilateral flap has long been recognized as a problem specific to this form of repair. The author presents an ingenious and effective technique for repairing this deformity. (Cosman)

Converse, J.M., D., Wood-Smith, and J.G. McCarthy, Report on a series of 50 craniofacial operations. *Plast. Reconstr. Surg. 55,* 283-293, 1975.

This is an analysis of the first group of 50 craniofacial procedures performed at the New York University Medical Center in the 5 year period from 1968 to 1973. Orbital hypertelorism constituted 28 of these patients, craniofacial dysostoses 15, malunited fractures of the orbital or midface region 4, hypotelorism 1, and facial microsomia 2. Complications included 1 death, a successfully resuscitated cardiac arrest in 1 other patient, 5 neurological complications, 6 infections, 3 frontal bone resorption or sequestrations, residual exophthalmos in 2 cases, and 3 post operative iliac donor site bleeding problems. Valuable details of procedure and other clinical details are presented in this report. (Cosman)

d'Assumpcão, E. A., Proboscis lateralis. Case report. *Plast. Reconstr. Surg. 55,* 494-497, 1975.

A brief review of the literature and the surgical procedure employed in a case of lateral nasal reduplication is presented (Cosman)

Dingman, R. O., D. L. Dingman, and R. A. Lawrence, Surgical correction of lesions of the temporomandibular joints. *Plast. Reconstr. Surg. 55,* 335–340, 1975.

25 additional cases of TM joint problems treated surgically are added to a previous report of 140 cases made in 1969. 13 cases of arthropathy, 1 case of arthropathy with chronic subluxation, 8 cases of chronic degenerative arthritis, 2 of chronic dislocation of the TM joint and 1 tumor of the TM joint constitute this additional material. Details of the anatomy and the operative procedures as well as complications are presented. (Cosman)

Edgerton, M. T., J. A. Jane, F. A. Berry, and J. C. Fisher, The feasibility of craniofacial osteotomies in infants and young children. *Scand. J. Plast. & Reconstr. Surg. 8,* 164, 1974.

This report is the result of a team-work between the departments of Plastic Surgery, Neurosurgery and Anaesthesiology at the University of Virginia Medical Center, Charlottesville, Virginia, U.S.A. Rapid strides are being made in the use of extensive craniofacial osteotomies and skeletal remodeling for congenital deformities such as those of Crouzon's disease, craniostenoses, and various forms of orbital hypertelorism. Enormous advantages to the child and parents have resulted from performing these corrections in infancy and early childhood.

The authors have been able to demonstrate the feasability of the these operations in a series of 17 children ranging from four months to five years of age. In several, cranioplasty, orbital repositioning, and midfacial advancement have been combined in a single procedure. Significantly different surgical techniques are used for the small children as compared with adult patients.

The principal new considerations involve: (1) new monitoring techniques to maintain level of anesthesia, electrolyte balance, thermal regulation through long operations, and appropriate blood gas levels; (2) modifications in osteotomies, to allow for bone growth and to prevent undesired growth arrests, in these small skulls and faces; (3) effective use of marked bone regenerative capacity of the cranial periosteum of infants; (4) development of small tools and exposures to facilitate access to the osteotomy sites in the little skull; (5) special postoperative management of intermaxillary fixation, use of tracheostomies and respirators, role of external traction, and fresh blood transfusions. (P. Fogh-Andersen)

Edgerton, M. T., D, B, Tuerk, and J. C. Fisher, Surgical treatment of Moebius Syndrome by platysma and temporalis muscle transfers. *Plast. Reconstr. Surg. 55,* 305-311, 1975.

The authors have treated 2 patients for the partial facial palsy associated with the Moebius

Syndrome. They point out that the consequences of the facial palsy may be often more significant clinically than the 6th nerve palsy which is the key to the Syndrome itself. The use of the platysma muscle spared in the condition as a transfer for voluntary dynamic facial movement is believed to be the first such example of the use of this technique. Other muscle transfers and suspensions were also employed. (Cosman)

Evans, D. and C. Renfrew, The timing of primary cleft palate repair. *Scand. J. Plast. & Reconstr. Surg. 8,* 153, 1974.

In an interesting report from the Department of Plastic Surgery and the Department of Speech Therapy, Churchill Hospital, Oxford, Evans and Renfrew present their speech assessment of 229 children with cleft palate treated by one surgeon, Peet, using a Wardill-Kilner V-Y repair. The assessment shows slight advantage conferred by operation within the first 8 months of life, and strong theoretical arguments concerning early speech development and the effect of maternal separation after this age are presented in support of early operation.

Whether or not poorer speech in children treated later can be attributed to hospital admission during the sensitive period after 7 months of age, there is no doubt that avoidance of this time is important for the emotional development of the child, since maternal separation after this age results in a measurable disturbance of behaviour and inevitable interruption in speech learning at an important stage. (P. Fogh-Andersen)

Fujii, Takaaki, and Hideo Nishimura, Reduction in frequency of fetopathic effects of caffeine in mice by pretreatment with propranolo. *Teratology, 10,* 149–152, 1974.

The authors attempted to test the protective effect of maternal pretreatment with propranolol against caffeine teratogenicity in pregnant mice. On the 13th day of gestation, pregnant mice were given a single iv injection of 2.5, 5.0, or 10.0 mg/kg propranolol and a single ip injection of 200 mg/kg of caffeine five minutes later. When fetuses were examined on the 19th day of gestation, it was found that the fetopathic effects of caffeine were significantly reduced by pre-treatment with propranolol at all three caffeine dosages employed in the experiment. (Lass)

Gaisford, J. C. and V. S. Anderson, First branchial cleft cysts and sinuses. *Plast. Reconstr. Surg. 55,* 299–304, 1975.

A brief review of the embryology and anatomy of the first branchial cleft cysts and sinuses with a resume of the authors' experiences is presented. 18 infra-auricular, post-auricular and upper neck cysts and sinuses were operated upon together with 17 preauricular cysts and sinuses, and 15 branchial cleft cysts within the parotid gland. The surgical treatments are illustrated by case reports and the complications are indicated. (Cosman)

Gorlin, R. J. and J. Cervenka, Syndromes of facial clefting. *Scand, J. Plast. & Reconstr. Surg. 8,* 13, 1974.

This paper was presented as an opening lecture by Gorlin who was an invited speaker at the 2nd International Congress on Cleft Palate in Copenhagen in August 1973. The paper is the first of a series of 24 original articles based on presented papers and introductory remarks during panels given at the Cleft Palate Congress, and published in a double issue of the *Scand. J. Plast. & Reconstr. Surg.* vol. *8* (1974).

As Gorlin and Cervenka write, within the compass of these few pages, they "can only limn an abbreviated presentation of the subject of syndromes of facial clefting—as it were an antipasto to whet the appetite of the reader for further reading." Those who wish to seek expanded versions of this subject are referred to the comprehensive publication "Facial clefting and its syndromes" by Gorlin, Cervenka & Pruzansky in *Birth Def. Orig. Art. Ser. 7* (1971) which contains numerous illustrations.

It is the authors' hope, however, that the presentation in the Scand. Journ. will aid the reader in the following ways: (a) one must be cognizant that facial clefting is a component of over 100 syndromes, (b) many of these syndromes exhibit single gene inheritance and hence appropiate genetic counselling must be given, (c) conversely, parents should be apprised if clefting has only aleatory association with their child's disorder, and (d) we cannot but secretly hope that our efforts will serve a heuristic purpose in catalysing others to create and define new entities within the bag of genetic heterogeneity.

This excellent paper from the Division of Oral Pathology, University of Minnesota, is followed by a very useful list of more than 100 references. (P. Fogh-Andersen)

Hanada, K. and W. M. Krogman, A longitudinal study of postoperative changes in the soft-tissue profile in bilateral cleft lip and palate from birth to six years. *Amer. J. Orthod., 67,* 363–376, 1975.

This is an extension of a previous study on postoperative skeletal growth to determine whether postoperative soft-tissue growth paralleled bony growth. A total of 114 lateral X-ray films were measured with an age range of one month to six years. It was found that the postoperative bilateral cleft lip and palate patient had a slightly retarded but essentially harmonious soft-tissue profile that gradually improved from birth to six years. On the basis of this finding, it is felt that early orthopedic intervention is not necessary in these patients since normal growth adjustment has resulted in an acceptable profile. (Luban)

Hotz-Jenny, M. and M. Perko, combined orthopedic and surgical approach to cleft lip and palate. *Schweiz. med. Wsch. 104,* Nr 718 (1974)

Two well-known authors, one orthopedic, the other surgeon, describe their teamwork in treating + clefts at the Maxillofacial Center in Zürich.

Aiming not to interfere we growth potentials of the maxilla, but to stimulate functionel progress, especially in speech development, orthopedic treatment is applied already very early in form of an acrylic "drinking plate", while the lip cleft will be closed at 6 months, the velum cleft at 18 months. The remaining cleft in the hard palate is covered by a "speech plate" between 3 and 5 years. Then the hard palate cleft is closed too (bilateral clefts are closed between 7 and 8 years). Then the usual orthopedic treatment begins, applied till the age of about 15 years.

Logopedic treatment is applied between the 3rd. and the 9th. year.

Many technical data from both disciplines are given and demonstrated on several pictures, which show the good results achieved. (Heinz Reichert)

Hotz, M. M. and M. Perko, Early management of bilateral total cleft lip and palate. *Scand. J. Plast. & Reconstr. Surg. 8,* 104, 1975.

With a view to avoiding or minimizing postoperative growth disturbances, a coordianted maxillary orthopedic and surgical management of total bilateral clefts was introduced at R. Hotz's and H. Obwegeser's University Clinics in Zürich, Switzerland, in 1968. It consists of four surgical steps and concomitant pre and postoperative orthopedic treatment and retention. The objective has been to obtain optimal form and function during the whole course of development, performing every step at the most propitious moment and refraining from measures that could make later management more difficult.

For the above purpose the Celešnik approach to bilateral lip repair and a two-step closure of the palate have been used for the past six years. As long-term results have not yet been available, the authors can only sustain the claim that coordination and timing of procedures are an absolute necessity in treatment of bilateral total clefts. The Celešnik two-step repair of the lip in connection with orthopedic guidance has resulted in good alignment and occlusion of the arches with no need for expansion in deciduous dentition.

Two-step palatal closure with postponement of the intervention in the hard palate, as advocated by many authors (Schweckendiek a.o.), in the authors' opinion allows of better maxillary development with cephalometric values within the range of normal variations to-date. The speech results are characterized as very satisfactory. The number of patients treated according to the described principle is not stated, however. (P. Fogh-Andersen)

Ide, C. H. and J. E. Holt, Medium cleft face syndrome associated with orbital hypertelorism and polysyndactyly. *Eye, Ear, Nose, and Throat Monthly, 54,* 150-151, 1975.

The authors have reported a single case of medial cleft face syndrome which was associated with orbital hypertelorism and polysyndactyly which they feel has a normal life expectancy. Other findings included depression of the nasal bridge, right epicanthal fold, ptosis, left lid, bifid nose, bifid uvula. (Gregg)

Isshiki, N., and M. Morimoto, A new folded pharyngeal flap. Preliminary report. *Plast. Reconstr. Surg. 55,* 461-465, 1975.

In an attempt to minimize post operative scar contracture and shrinkage after a pharyngeal flap operation, the authors have folded the pharyngeal flap on itself and then inserted the flap via short penetrating incisions laterally on each side of the soft palate thereby butting a partially denuded section of the folded over flap into the soft palate. The flap is superiorly based. 14 patients were so treated. In none of the cases did detachment of the flap occur nor were any other complications recorded. Reports relative to functional success are to follow. (Cosman)

Kunikiyo, Y, A study on the maxillo-facial pattern of patients with unilateral cleft lip and palate by means of cephalometric roentgenogram. *Japan J. Oral Surg. 19,* 545–557, 1973.

The purpose of the study was to reveal maxillary development of cleft palate cases in stages of Hellmann's dental age. Roentgen cephalogram of 67 cleft lip and palate and 48 non-cleft cases were investigated in angle and line. Followings are some of the results; 1) Base of maxillary alveolar process was retruded in any dental age stage, especially in III B, III C and IV A stages. 2) Total face height was less than the control group in III A male, III B female and III C female groups. 3) In all stages, height and depth of the mid-face were retarded. 4) Retrusion of antero-posterior dimensions of the maxilla came evident in the advanced stages of the dental age. As the major factors of this considered were retrusion of point A, alveolar process of incisor teeth region and frontal teeth. 5) Maxillary developments differed little in the ages of cleft palate operation.

Lindsay, J. R., F. O. Black and H. Donnelly Jr., Acrocephalosyndactyly (Apert's Syndrome) temporal bone findings. *Ann. Otol., Rhinol., and Laryngol., 84,* 174-178, 1975.

The authors have reported a single case, their primary reference being to the temporal bone findings. There was no history of familial congenital anomalies. The child had a flattened forehead and superior orbital ridges, prominent epicanthal folds, protruding eyes (shallow orbits), high arched palate, syndanctyly of hands and feet. There were also multiple preauricular tags torticollis. Autopsy showed premature closure of the coronal and anterior sutures, atrial septal defect, patent ductus arteriosus, nosocardia, partial biliary artesis with agensis of the gall bladder, bicornate uterus, and focal cytomegaly of the adreneal cortex. (Gregg)

Maillard, C. F., R. Otto, and L. Clodius, Xeroradiography examinations in orbitonasal surgery. Preliminary report. *Plast. Reconstr. Surg. 55,* 664-666, 1975.

Examples are presented in which the position of bone grafts and the contour of the facial bones following repairs of fasciostenosis and nasal orbital fracture are presented. The accentuation of the fine definition and contrast in pictures of the bone and soft tissue structures is demonstrated. The disadvantage of slightly higher exposure of the patient to radiation than in conventional films is mentioned. (Cosman)

Malek, R., Nasal deformities and their treatment in secondary repair of cleft lip patients. *Scand. J. Plast. & Reconstr. Surg. 8,* 136, 1974.

In this paper from Petit's clinic at Hôpital Saint-Vincent de Paul in Paris, the author reports his own experience in 175 cases of secondary repair of cleft lip nose deformities. In spite of the great variability of the cases a relatively simple strategy has been defined, based on a precise study of the iesions. In unilateral cases rhinoplasty is usually performed by a submucosal approach through a vertical incision in the columella. It includes septal straightening, nasal osteotomies, and sharp dissection and reduction of the triangular and alar cartilages to allow of their suturing in normal position.

In bilateral cleft lip cases with shortness of the columella two techniques have been utilized. In the rare cases with correct height and width of the lip, a V-Y plasty on the nasal tip was performed with good results. In most cases the Abbe-Estlander flap was the procedure of choice. In general the rhinoplasties were carried out on patients between 15 and 20 years of age, and were considered to be the last stage of secondary cleft lip repair. The procedures described in the paper make no pretence to be original, and for reasons of clarity, the author has not wanted to quote any names of inspiring colleagues; likewise no list of references is given. (P. Fogh-Andersen)

Matthews, D., The collapsed maxillary arch. *Scand. J. Plast. & Reconstr. Surg. 8,* 116, 1974.

In this report from the Hospital for Sick Children, Great Ormond Street, London, Matthews explains his principles of management of the collapsed maxillary arch in cleft lip and palate patients, by prevention as well as by secondary correction involving the orthodontist, the prosthetist and the surgeon. His technique of bone grafting is described, early as well as secondary, and the results of 73 cases of early bone grafting are analysed. Secondary bone grafting is recommended mostly in conjunction with rapid expansion with segmental cap splints and expansion screws, in practice at the minimum age of 9 years.

In patients who complain chiefly of disfigurement, i.e. when neither malocclusion nor nasal obstruction are causing problems, Matthews draws the attention at the well established combination of a rhinoplasty, lip revision and inlay to carry a prosthesis—in one or two operative stages. (P. Fogh-Andersen)

McComb, H., Treatment of the unilateral cleft lip nose. *Plast. Reconstr. Surg. 55,* 596-601, 1975.

The author advances the thesis that the individual with a unilateral cleft lip has an increase in the length of that half of the nose on the side of the cleft and that accordingly a unilateral shortening is an important part of the treatment of a cleft lip nasal defect. The author's procedures are described and his results depicted. (Cosman)

Miglets, A. W., D. Schuller, E. Ruppert, and D. G. Lam, Trisomy 18, a temporal bone report. *Arch. Otolaryng. 101,* 433-437, 1975.

This is a report of the temporal bone finding in a single case of trisomy 18. There is a review of the literature. The autopsy of the case presented showed trisomy D syndrome confirmed by chromosome count. "All of the expected features including some less commonly associated features were present." There was prominent occiput, small mandible, hypertelorism, flat nasal bridge. It was not noted whether there was any palatal clefting. (Gregg)

Minami, R. T., E. N. Kaplan, G. Wu, and R. P. Jobe, Velopharyngeal incompetence without overt cleft palate. *Plast. Reconstr. Surg., 55,* 573-587, 1975.

An extensive experience involving 98 patients out of 188 with a diagnosis of velopharyngeal incompetence without overt cleft palate (with or without submucous cleft palate) is here presented. These patients were seen in a 10 year period at the Cleft Palate Clinic at Stanford University Medical Center. The patients were divided into those with acquired palatal pharyngeal disproportion after tonsillectomy and adenoidectomy, those with an abnormal anatomy of the levator palati muscles including a submucous cleft palate, those with palatal paresis, and the remainder with a miscellaneous group of velopharyngeal incompetence. The details of the authors' experience are presented and merit careful study. (Cosman)

Momma, W.-G., W. Koberg, and W. Mai, Indications for and results of the Abbe flap operation. *Scand. J. Plast. & Reconstr. Surg. 8,* 142, 1974.

In this report from Düsseldorf and Aachen, West Germany, the authors have evaluated 204 case histories of patients having an Abbe flap performed. The series comprises 186 cleft patients and in addition 18 cases treated for tumours or injuries. 96 patients were reexamined and data concerning surgery, complications, anatomical, functional and aesthetic results were obtained.

Complete, and especially bilateral clefts formed the main group for Abbe plasty. Of complications wound dehiscence took place in about 15% (31 cases), partial flap necrosis in 2% (4 cases). At follow up of the 96 cases the patients were satisfied in 93%, the surgeon, however, in only 65% with corrective surgery indicated in 63%. Re-innervation of the flap, which usually begins at the third postoperative month, was found to continue even after 6 months.

In the authors' opinion the indication for Abbe-flap-plasty should be "as seldom as possible, as often as necessary" with a thorough re-examination of the necessity in every individual case. (P. Fogh-Andersen)

Mulliken, J. B. and J. E. Hoopes, W-epicanthoplasty. *Plast. Reconstr. Surg. 55,* 435-438, 1975.

A technique of multiple W-excisions of epicanthal folds is demonstrated to be effective in cases of post traumatic epicanthus as well as in cases of blepharophimosis syndrome. (Cosman)

Nadler, A. L., Prenatal diagnosis of inborn defects: a status report. *Hospital Practice, 10,* 41–51, 1975.

The author has presented what is basically a teaching paper aimed primarily at the general practioner of medicine. He feels that transabdominal amminocentensis early in the second trimester and the culturing of cells it yields, improved techniques for visualization of fetal structures, development of methods for identifying fetal disorders by maternal and fetal serology, are techniques which have promise for the detection of congenital defects. The present indications for prenatal diagnosis are: (1) maternal age over 37, (2) a patient known to carry a chromosomal translocation, (3) a previous child with trisomic Down's Syndrome, (4) families with x linked recessive disorders and autosomal recessive disorders known to be detectable in utero, (5) previous child with anencephaly. (Gregg)

Ortiz-Monasterio, F., A. Olmedo. et al., Final results from the delayed treatment of patients with clefts of the lip and palate. *Scand. J. Plast. & Reconstr. Surg. 8,* 109, 1974.

In this report from the Cleft Palate Clinic in Mexico, Ortiz-Monasterio and co-workers analyse a series of cleft lip and palate patients operated on late in childhood or as adults. In a ten year period (1963-72) 780 patients not previously operated on were treated in the Cleft Palate Clinic; 450 of the patients were 6 years or older when first seen, and this group constitutes the material for the report.

Preoperative findings as to facial growth, dental

occlusion, hearing, and ear disease are discussed, and the final results are analysed. The main conclusions are the following: all unoperated patients have good facial growth and collapse is rare; the maxillary segments, however, are outwardly rotated. Repair of cleft lip alone has given excellent cosmetic results, but elaborate orthodontics may be required. Late closure of the palate has been disappointing with poor speech results even in cases with good anatomical results and a long mobile palate. E.N.T. and hearing problems were found to have the same incidence in unoperated adults as in patients operated on in infancy.

The reason for the delayed treatment were both socio-economical and cultural. The authors stress that facilities for treatment of facial clefts have to grow in the developing countries if we want to prevent patients from reaching into a hopeless situation. (P. Fogh-Andersen)

Pigott, R. W., The results of nasopharyngoscopic assessment of pharyngoplasty. *Scand. J. Plast. & Reconstr. Surg. 8,* 148, 1974.

In this paper from the Plastic Surgery Unit at Frenchay Hospital, Bristol, Pigott reports on his continued experience with nasopharyngoscopy. In combination with simultaneous videotaping of lateral pharyngeal X-ray, nasopharyngoscopy has proved to be a valuable investigation in the assessment of the aetiology of palatopharyngeal incompetence, indicating the size and shape of the relaxed and contracted palatopharyngeal isthmus and the muscle groups which are active in continous speech.

Selection of an appropriate pharyngoplasty has been based on this information and following surgery particularly valuable information has been obtained, often enabling the surgeon to modify the operation, with marked improvement of the overall success rate. In 33 out of 39 patients during the past five years the result of surgery with regard to palatopharyngeal incompetence was registered. Success defined as the complete absence of detectable nasal escape was achieved in 18 out of the 33 patients.

Failure to abolish nasal escape was seen to be due to technical failure of the operation in the majority of the cases. However, a group of patients were demonstrated to have a rhythm fault in that the palate made rapid easy contact on the majority of sounds in connected speech, but totally failed to lift on one or two specific sounds, usually associated with 's'. (P. Fogh-Andersen)

Poswillo, D., The pathogenesis of submucous cleft palate. *Scand. J. Plast. & Reconstr. Surg. 8,* 34, 1974.

In this experimental study from the Royal College of Surgeons of England Research Establishment Downe, Kent, and the Queen Victoria Hospital, East Grinstead, Sussex, England, the mechansim of phenytoin induced cleft palate development in mice was investigated.

Today submucous cleft palate (SMCP) is reported as the most common form of cleft of the posterior palate in humans with an incidence of 1:1200 births. The pathogenesis of SMCP has so far not been determined in man, though two disparate mechanisms, anomalous shelf fusion or failure of mesodermal proliferation have been proposed. An animal model of SMCP is described in which the anomaly has characteristics in common with the condition in man. A series of pregnant mice had phenytoin given in paediatric suspension at the rate of 150 mg/kg by gastric intubation from day 12 to day 16 of pregnancy. Examination of 100 consecutive fetuses at day 18.5 revealed 16 with complete cleft palate, 15 with CMCP, and 69 were normal.

Serial study of the mouse fetuses in which SMCP was induced supports the hypothesis of interference with mesodermal differentiation. A centripetal gradient of differentiation in the palatal shelf is described, commensing at the nasal foramen and extending to the uvula. When this gradient is disturbed by teratogens, after fusion of the palate, either SMCP plus bifid uvula, or bifid uvula alone may result, the anomaly being determined by the stage of onset in relation to the antero-posterior gradient of risk.

Study of the animal defect assists with identification of the causal mechanism in man. The findings support the proposal that the teratogenosensitive period of palatogenesis in man should be regarded as extending from early embryogenesis to about the 12th week of development. Until that time agents can act to interfere with the developing palatal plates and the velar mesoderm in such a way that SMCP and bifid uvula, microforms of cleft palate, could result.

Poswillo's article is an interesting contribution to the study of exogenous factors in the etiology and pathognesis of cleft palate, complete as well as submucous; the role of heredity, however, which is so evident in at least 20% of the cases in man, is not mentioned. (P. Fogh-Andersen)

Prydso, U., P. C. A. Holm, E. Dahl, and P. Fogh-Andersen, Bone formation in palatal clefts subsequent to palato-vomer plasty. *Scand. J. Plast. & Reconstr. Surg. 8,* 73, 1974

This paper from the Royal Dental College and the Cleft Palate Centre in Copenhagen, Denmark, is

a contribution to the study of the influence on transverse maxillary growth resulting from traditional two-layer palato-vomer plasty, originally introduced by Veau and widely used in various modifications.

Palatal bone biopsies from nine children 22 to 24 months of age, with complete unilateral cleft, showed that palato-vomer plasty results in uninterrupted osseous closure of the cleft in the hard palate. The newly formed bone had fused with the nasal septum, but no suture had developed corresponding to the fusion. The bone contributed to the vertical growth of the nasal and oral cavities, but in spite of an extremely active suture on the non-cleft side the osseous closure of the cleft seems to inhibit transverse maxillary growth.

Periosteal biopsies from the same children obtained from the buccal aspect of the maxilla from the region of the second deciduous molar on both sides, showed reduced appositional growth activity on the cleft side, measured by histochemical demonstration of alkaline phosphatases. Periosteal biopsies from nine unoperated children aged 2 months with the same type of cleft showed equal appositional growth activity on both sides.

As a conclusion of the investigation it is recommended that surgical procedures resulting in osseous closure of the cleft in the hard palate ought to be avoided until the sutural growth of the upper face has terminated, which according to Björk happens in most cases when the distal epiphysis of the radius has closed. (P. Fogh-Andersen)

Puckett, C. L., H. W. Neale, and K. L. Pickrell, Dynamic correction of unilateral paralysis of the lower lip. *Plast. Reconstr. Surg. 55,* 397-400, 1975.

A simple procedure performed under local anesthesia to restore essential movement to the side of the lower lip paralyzed by injury to the mandibular branch of the facial nerve is presented. The operation consists of a limited lateral resection of the paralyzed lower lip plus transposition of a segment of the orbicularis muscle from the paralyzed lower lip to the normal upper lip through a subcutaneous tunnel. The procedure may have merit for similar problems in congenital facial palsy and is in any case a desirable adjunct whose results seem to justify further exploration. (Cosman)

Robertson, N. R. E. and A. Jolleys, The timing of hard palate repair. *Scand. J. Plast. & Reconstr. Surg. 8,* 49, 1974.

This paper from Cardiff, Wales, and Manchester, England, is the first report of a study designed to determine whether early hard palate repair leads to an unwelcome restriction in the growth of the upper jaw or not. The article reports on the development of occlusion and of facial profile in two groups of children with repaired unilateral complete cleft of lip, alveolus and palate.

The study included forty newborn infants, allocated into two groups of equal number. All the surgery was performed by the same person. The treatment which was given to the children in the two groups differed in only one way; the repair of the hard palate was performed for the children in the first group at the age of eleven months while in the second group it is being carried out at five years.

An initial comparison of the occlusions and of the facial profile when the children were aged four and a half years (i.e. immediately before the children in group two had their hard palate repair) showed no significant differences in respect of occlusion or of profile. (P. Fogh-Andersen)

Sieber, S. M., J. Whang-Peng, and R. H. Adamson, Teratogenic and cytogenetic effects of hycanthone in mice and rabbits. *Teratology, 10,* 227–236, 1974.

In this article the authors report on the teratogenic and cytogenetic effects of hycanthone in mice and rabbits. They found that when this drug was administered daily to pregnant mice, it produced embryolethality and teratogenicity. Included among the induced malformations was cleft palate/lip in mice. (Lass)

Takahashi, S., T. Shigematsu, M. Ohi, M. Furukawa, and K. Kawamoto, Closure of palatal fistula in a cleft palate patient by the use of the tongue flap. *Japan J. Oral Surg. 19,* 601–605, 1973.

The use of tongue flaps to close palatal fistulae in cleft palate cases was introduced by Guerrero-Santos and others. The authors also applied the method to three cases. They suggested to fix the tongue onto upper frontal teeth for several days, and reported no apparent disfunction of the tongue after the pedicle was dissected. (Machida)

Takahashi, S., T. Shigematsu, M. Ohi, T. Kawamoto, K. Kawamoto and M. Furusawa, Rib anomalies in cleft lip and/or palate subjects. *J. Japan Stomatol. Soc. 23,* 391–397, 1974.

Chest roentgenograms were examined in 212 cleft lip and/or palate cases of 3 months to 54 years of age. Rib anomalies were found in 24 cases (11.3%) of them, 3 cases having two anomalies for

each. The incidence for cleft types was cleft lip and palate 15.3%, cleft palate 15.0% and cleft lip 8.8%, respectively. Among the twenty-seven rib anomalies found were; eight hyperplasia of rib I, seven missing of XII, four lumbal ribs, two fusions of I and II, and others. From the review of litteratures the authors consider the causes of these rib anomalies to be environmental, rather than genetic. (Machida)

Tanzer, R. C., The constricted (cup and lop) ear. *Plast. Reconstr. Surg., 55,* 406–415, 1975.

The group of auricular anomalies characterized by a constricted or tightened rim and occurring sometimes alone or sometimes in association with other maxillofacial anomalies is discussed and multiple procedures reviewed by the author. A presentation of his techniques for repair and the several forms of the anomaly are outlined. (Cosman)

Terada, Mitsuyo, Effect of physical activity before pregnancy on fetuses of mice exercised forcibly during pregnancy. *Teratology, 10,* 141–144, 1974.

The authors studied the effects of physical training before pregnancy on fetal development in Colony-bred ICR-JCL female mice who were subjected to a daily routine of running six days per week for four weeks from the sixth to the ninth weeks of age. These mice, along with control mice who were not forced to exercise, were mated and forced to exercise by running for 30 minutes per day on days 9–16 gestation. They found that the fetuses of females who exercised during midpregnancy exhibited increased mortality but no malformations. Furthermore, physical training before pregnancy was effective in *decreasing* fetal mortality in the female mice who exercised during midpregnancy. (Lass)

Thomson, H. G., and H. J. Hoffman, Intracranial use of a breast prosthesis to temporarily stabilize a reduction cranioplasty: Case report. *Plast. reconstr. Surg., 55,* 704–707, 1975.

The ingenious use of an inflatable Simaplast implant beneath reconstructed cranial bone and outside the dura is presented in a patient whose previous repair had collapsed producing a deformity even greater than that which had initiated the first procedure. The prosthesis remains in place 2 years following the initial procedure. The problem of its removal and/or the necessity thereof remains to be considered. (Cosman)

Walker, B. E., Anita Patterson, Induction of cleft palate in mice by tranquilizers and barbiturates. *Teratology, 10,* 159–164, 1974.

The authors attempted to determine if fetal muscular movements are an important factor in closure of the secondary palate. They reasoned that if this hypothesis is correct, then agents that reduce muscular movements in the fetus should have the potential of inducing cleft palate. Several barbiturates and tranquilizers, either individually or in combination, were injected into pregnant A/J, C3H, and CD1 mice in dosages which produced sedation during the expected palatal closure time. They found that: (1) of 2074 fetuses from treated pregnant mice, 308 exhibited clefts of the palate; (2) phenobarbital and hydroxyzine were the more teratogenic drugs; and (3) the most critical period for such drug treatment was at least one day prior to the time that the palate normally closes. The authors conclude that tranquilizers and barniturates are significant cleft palate teratogens in mice. (Lass)

Yoshida, M., Analytical study on frequency spectrum of normal and cleft palate speech. *Japan J. Oral Surg. 19,* 527–544, 1973.

In order to investigate listenability of cleft palate, frequency spectrum and speech intelligibility were studied in seven cleft palate cases, aging from 15 to 21 years old, and seven control normals. Tape-recorded (Sony TC-9680) samples was analyzed by sound spectrograph (Rion SG-07). Intensities of speech wave at rising section, transitional section and vowel section were calcuated through Fourie equation using an electronic Computer (FACOM 270-20).

Some of the results are as follows; 1) Before speech therapy, sound components were recognized clearly at the area of below 1000 Hz. It was recognized that the component at the rising section disappeared after speech therapy. 2) Slight changes of speech before and after speech therapy can be observed more accurately by frequency spectrum examination at the rising and transitional sections than by intelligibility tests. 3) Sound spectrogram of /k,t, and n/ combined with /a and i/, making /CV/, were examined thoroughly before and after speech therapy. (Machida)

ANNOUNCEMENTS

1976 ANNUAL MEETING AMERICAN CLEFT PALATE ASSOCIATION

The 1976 Annual Meeting of the American Cleft Palate Association will be held May 12–16, 1976 in San Francisco at the Hotel St. Francis. San Francisco is one of the most exciting convention cities in the United States and May is the most pleasant time of the year.

Your Local Arrangements Committee, under the leadership of Dr. Jack Owsley, is hard at work to make this convention a memorable event. Special hotel rates were obtained ranging from $19 per person double occupancy and up. Family plan is available. An adequate number of rooms are being held for us, but early reservations are recommended. Charter or group flights from New York and/or Chicago are being considered.

Your Program Committee invites your participation and suggestions. It solicits abstracts of papers, motion pictures, table clinics, scientific exhibits and demonstrations.

A poster session is planned as a new method of presentation. Poster sessions have been used by several other scientific groups and found to be highly successful. A block of program time will be allotted exclusively to a poster session. Presentors will be required to restrict the message to a poster board of 30 x 40 inches. Additional materials for distribution can accompany the poster. Each presentor will be stationed at his or her poster. The informality of this face-to-face contact offers a degree of interchange often lacking at a traditional platform presentation. Some materials can be better presented through informal discussion and may require longer time than can be allotted to a platform lecture. Authors desiring to use this vehicle of presentation should follow the same instructions outlined for below papers, indicating their preference for poster presentation.

The following information is included for your use and careful consideration in preparing proposals for presentation.

Papers

Summaries of 300–600 words are needed for consideration by the Program Committee. Each summary must be in sextuplet, double-spaced on 8½ x 11 typing paper. This will help to expedite the work of the Program Committee. Each submitted paper must include a cover page on each of the six copies submitted. The cover page must follow this form:

Title (of paper).

Authors' Names (for multiple authors, list first the speaker who will present the paper.) Give the following information for each author: Institution, name and location; specific office address; home address)

Degree (highest degree held).

Member or Non-member of ACPA.

Time required. Request for more than ten minutes for a paper should be accompanied by justification. The final allotment of time will be made by the Program Committee.

Equipment required. Standard equipment available will consist of the following items: a blackboard, a pointer, a single microphone, a 2 x 2 slide projector and a 3¼ x 4 slide projector. Any other audio-visual equipment must be identified and explained.

In addition, every paper must have an abstract of 75 words which will be printed in the Program. Another abstract of 200 words is required for publication in the Cleft Palate Journal.

Motion Pictures:

A brief abstract with running time, size of film, and whether or not it has sound.

Scientific Exhibits, Table Clinics and Demonstrations:

Brief abstract, amount of floor or table space required. Electrical or any other equipment. The Association will pay for the basic needs of setting up such materials. All other expenses must be underwritten by the exhibitors.

Deadline for submission of all abstracts and presentations of any nature is November 15, 1975. Authors whose papers, posters, films, exhibits or demonstrations are selected for inclusion by the Program Committee will be notified in January 1976.

At the time of presentation, all papers should be in final form for publication in the Cleft Palate Journal, subject to acceptance by the Editorial Board.

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ANNUAL CONVENTION OF CANADIAN SPEECH AND HEARING ASSOCIATION TO BE HELD ON APRIL 21–24, 1976

The Canadian Speech and Hearing Association will hold its Annual Convention on April 21–24, 1976, hosted in Halifax, Nova Scotia by The Atlantic Provinces Speech and Hearing Association. Speakers will include: Dean E. Williams, Martha Taylor Sarno, Norma Rees, Louise Getty, Joel Stark, Mark Ross, Donald Hood, Agnes Ling and David Yoder. The conference will feature a call for convention papers and a special lecture by Eric Lenneberg.

For further information, please contact Wendy McPhee at 78 Stewart Harris Drive, Dartmouth, Nova Scotia, Canada.

VELOPHARYNGEAL INSUFFICIENCY SYMPOSIUM

A symposium devoted to the subject of velopharyngeal insufficiency, and sponsored by the American Cleft Palate Eductional Foundation, will be held on Monday and Tuesday, March 8 and 9, 1976, at Tulane University Medical Center, New Orleans, Louisiana. The faculty, representing the disciplines of speech, dentistry, radiology, and plastic surgery, will present the most current information on the basic sciences of the normal and abnormal velopharyngeal mechanism, diagnosis of velopharyngeal insufficiency, treatment planning, and treatment. Registration fees for the one and one half day program will be $35 for students and residents and $75 for members of the health professions. Further information and registration materials may be obtained from the Symposium Chairman, William C. Trier, M.D., Department of Surgery, Arizona Medical Center, University of Arizona, Tucson 85724.

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