Abstracts of Current Literature

Anatomy

AN ANTHROPOLOGIC STUDY OF THE SKULL OF THE NEW-BORN INFANT. JELINEK-VOLICEK, M. Ztschr. f. Geburtsh. u. Gynäk. 114:271, 1937.

Investigation of the diameters of the head at birth and for varying lengths of time afterward shows that the form of the infant's head is similar to that of the parents unless a contracted pelvis or other abnormality produced marked molding of the head. In such a case, the head reverts to its normal shape soon after delivery.

In general, at birth the head of a boy and that of a girl are of equal height and breadth but the girl's head is shorter anteroposteriorly. This difference becomes more marked in postnatal life. The infants of multiparas and primiparas show the same general head form. The relative measurements of the skull do not show a difference in breech and cephalic presentations. Twins from a single ovum show identical head form. (AJDC, 54:1359) (CDAB 1:4.)

*TECHNICAL ASPECTS OF THE ANALYSIS OF BODILY CONFORMATION IN CHILDREN. W. KORNFELD, Acta Pædiat. 19:505, 1937.

Kornfeld reviews the anthropometric methods which are employed currently by the University Children's Clinic, Vienna. A table of length as a function of age and a table of weight as a function of length have been made up on the basis of a large number of measurements of children of middle Europe. A coordinate system has been prepared in which weight is represented on the ordinates and length on the abscissae. The first step in the classification consists in allocating the patient with reference to his age and height, then with reference to his height and weight. The two allocations determine the position of a point which is plotted on the coordinate system. This point serves to visualize the patient's gross physical features at any given time; by determining a series of such points at different times the variations of the patient's body build through infancy and childhood can be represented in a graphic manner. A more refined method of analysis which is used in conjunction with the foregoing system is the determination of the trunk index; this is defined as the ratio between the height of the patient sitting and the patient's length from crown to sole. The trunk index is used in conjunction with the "relative circumference of the chest," which is the ratio of the circumference of the chest to the total length of the body. Values for these indexes have been gathered from a large number of observations. They are also represented on a coordinate system and used for the purposes already described. The circumference of the wrist serves as an index of skeletal type. Muscular development is judged by the circumference of the upper arm and that of the calf of the leg. The state of the subcutaneous tissues is estimated by measuring the thickness of a fold of skin lifted by the fingers; three sites are selected: one under the midpoint of the clavicle, another about 2 cm. above the umbilicus and a third between the vertebral column and the medial border of the scapula. A fourth method consists in measuring the width of the face with calipers, first applied lightly, then with firm pressure to points over the zygomatic arches.

The merits, demerits and possible applications of the method are discussed. A useful bibliography is appended. McCUNE, New York.

* Reprinted by courtesy of The American Journal of Diseases of Children.

Case Analysis and Diagnosis

CONSTITUTION, HEREDITY, AND ORTHODONTIA. H. BERGER, Amer. J. Orthodont. & Oral Surgery 24:136 (Feb.) 1938.

Based upon heredity and a study of the faces of the usual three types, the author offers a diagnostic system along the principles of heredity. A discussion of the relation of small teeth in large jaws, and vice versa, is included with the outline of the diagnostic system. A maximum zygomatic breadth measurement is taken and is said to be three times the alveolar breadth in the region of the teeth under the insertion of the zygomatic bone. If the measurement of the alveolar breadth, which is usually from the middle of the first molar on one side to the middle of the first molar on the other side, is in excess of one third the maximum zygomatic breadth, the author feels extraction is in order to establish a convenient relation between the denture and the bony base.

LEWIS, Dayton.

Comparative Anatomy

A FURTHER CONTRIBUTION TO MANDIBULAR KINETICS. G. Y. HILDEBRAND, J. D. Res., p. 551 (Dec.) 1937.

This study considers the relationship between the masticatory movements in ruminants and in man, and the physiological rest position of the mandible and its relation to the masticatory curve.

Animals representing the three mammalian types and man were studied by means of tracings of motion pictures of the jaw displacements in mastication.

Experiments seem to justify the assumption that the human jaw, while functioning, can perform movements resembling those found in the three mammalian types.

PREWITT, Lexington.

TOOTH SUSPENSION. A COMPARATIVE STUDY OF THE PARADENTAL TISSUES OF MAN AND OF THE GUINEA PIG. PAUL E. BOYLE, J. D. Res., p. 37 (Feb.) 1938.

Except for certain modifications to provide for a suitable environment for enamel and dental formation, the constantly growing incisor teeth of rodents are suspended in essentially the same manner as are the fully formed teeth in man. Both types are so designed that the stresses of occlusion are absorbed and dissipated chiefly in the incisal part of the paradentum, leaving the apical portion subject to relatively minute forces. Occlusial forces act to be exerted first as hydraulic pressure on the walls of the alveolus.

PREWITT, Lexington.

Dental Hygiene and Public Health

DENTAL CARIES IN AMERICAN INDIAN CHILDREN. KLEIN, HENRY and CARROLL E. PALMER. Pub. Health Bull. No. 239. Government Printing Office, Washington, D. C.

Studies of certain characteristics of prevalence and severity of dental caries among different population groups suggest that epidemiological investigations may make important contributions to the development of public health methods for control of this disease. Data bearing on this subject are presented in a recent bulletin issued by the Public Health Service, which gives the dental status of 8,257 American Indian children who are members of 110 different Indian tribes and who live on 76 reservations in 16 different States in the United States. Prevalence and severity of attack by caries for children of each tribe and for aggregates of tribes living in six widely separated geographic localities are found to be markedly different. The highest and lowest rates of attack appear, respectively, among children living in the extreme northwestern and southwestern sections of the country. Attempts to correlate the differences in caries with climatic and dietary factors are inconclusive, but implications of the findings are discussed and suggestions are made regarding further studies. (CDAB, 14:70.)

STEADMAN, St. Paul.

Dentistry and Dental Relations

ORTHODONTIA FOR GENERAL PRACTITIONERS. DAVID W. MCLEAN, J.A.D.A. & D. Cosmos p. 413 (Mar.) 1938.

The position of orthodontics in dental science is anomalous in two respects: (1) "undergraduate education in orthodontics does not fit the graduate to practice it," yet in smaller communities there is a great need for orthodontia; (2) "orthodontics in treating human dentures is treating a mechanism and yet treating it purely from the standpoint of esthetics," according to the author. "Human dentures are not merely teeth set in a row; they are a functioning organ . . . " and fundamentally function is the first objective and esthetics comes second. The fundamental knowledge required by an orthodontist is discussed. Simplification of the etiological factors of malocclusion brings them into three classes: (1) "deflecting influences; (2) obstructing or inhibiting influences; (3) influences permitting too easy forward movement of part or all of the dentures without proper accompanying growth." Balanced occlusion at the completion of treatment is necessary for the future health of the periodontium, even to the extent of a "reasonable amount of 'selective spot-grinding' being usually necessary."

"When the general practitioner who has given no special study to the systemic and extraneous as well as the local factors, and to the technic of applying therapeutic force, undertakes an orthodontic case, he is playing with a buzz-saw and is even more certain to fail than is the orthodontist who has given no study to the occlusal factors."

STEADMAN, St. Paul.

Education, Legislation, Economics

ORTHODONTIA. PAUL GEOFFRION, J. Canad. D. A., p. 119 (Feb.) 1938.

This is the first of a complete series of articles on Orthodontia prepared especially for the general practitioner. The initial installment gives a brief historical resume and a few words on the importance of the study of Orthodontia. NEWCOMB, Cleveland.

ORTHODONTIA FOR GENERAL PRACTITIONERS. DAVID W. MCLEAN, J.A.D.A. & D. Cosmos., p. 413 (Mar.) 1938. (See Dentistry and Dental Relations.)

Endocrinology

CASES OF CLASS I AND II WITH ENDOCRINE INVOLVEMENT. H. L. MOREHOUSE, Internat. J. Orthodont., p. 1212 (Dec.) 1937.

Reports three cases which, from their basal metabolic tests, proved to be hypothyroidism. Roentgenograms and models are pictured. The treatment and results are discussed by Dr. Morehouse. One case is particularly interesting in that it was the orthodontic examination that brought to light a very marked case of hypo-thyroidism.

LEWIS, Dayton.

EFFECTS OF CERTAIN HORMONES ON GINGIVAL AND ORAL MUCOUS MEMBRANES. DANIEL E. ZISKIN, J.A.D.A. & D. Cosmos, p. 422 (Mar.) 1938.

The complexity of the research on the influence of endocrine imbalance "can readily be seen when it is understood that, according to our best knowledge, each gland secretes one or more hormones, which, in themselves, not only exert an action on the chemical and physiological processes of the body, but may also increase and otherwise affect the action of other ductless glands." "Pregnancy gingivitis" may be traced directly to the endocrines. There are five distinct forms of "pregnancy gingivitis": (1) bleeding of the gums; (2) slight change in the interdental papillae; (3) involvement of the free gum margin; (4) generalized hypertrophy of the tissue; (5) pregnancy tumor; each of these and variations are described distinctly. Treatment consists of frequent pro-

phylaxis, thorough scaling, and gingival curettage, followed by the interdental method of toothbrushing. Prolan tended to produce gum changes similar to "pregnancy gingivitis" while "estrogenic hormones and their stimulators have an apparent beneficial effect on the gums." Therapeutic use of estrogenic hormones or their stimulators have definite disadvantages and possible dangers as described by the author. . . We must conclude that the oral tissues as a whole are influenced by endocrine imbalance, as are tissues and organs in other parts of the body and, furthermore, that hormonal secretions are a potent factor in the etiology of certain gingival diseases. STEADMAN, St. Paul.

Etiology

CONSTITUTION, HEREDITY AND ORTHODONTIA. H. BERGER, Amer. J. Orthodont. & Oral Surgery, p. 136 (Feb.) 1938. (See Case Analysis and Diagnosis.)

DEEP BITES IN ADULTS. ABRAHAM WOLFSON, Amer. J. Orthodont. & Oral Surgery, p. 120 (Feb.) 1938.

Dentofacial casts were made of several adults with deep overbites. Anterior incisal splints augmented the usual orthodontic appliances in treatment. From his results and measurements the author makes the following observations: (1) deep overbite cases, upon treatment, show a major change in the anterior region only, and apparently more remarkably in the mandibular teeth; (2) the problem of vertical growth is one of excessive eruption of the anterior teeth rather than a lack of growth in the posterior teeth.

His measurements were made with calipers from a fixed point on the ridge of the nose to certain fixed points on the maxillary and mandibular incisors. From his results the author states that it is the mandibular anterior teeth that must be depressed. LEWIS, Dayton.

DIASTEMIA OF THE MAXILLARY CENTRAL INCISORS. (Etiology and Pathology.) L. GORNOUEC, La Revue de Stomatologie p. 30 (Jan.) 1938.

The causes of this common malocclusion are classified as either hereditary or local. The former encompass too large maxillae; normal maxillae with microdontia. The author also recognizes a rachitic condition which may lead to intermaxillary disjunction from operative or traumatic causes. Local dental causes he classifies as due to missing teeth, supernumerary teeth and malposed teeth. He concludes that the labial frenum is not the cause of interincisal spacing. The theory of a colleague, that acromegaly may be a cause, is cited. NEWCOMB, Cleveland.

Growth and Development

*ABNORMALITIES OF GROWTH AND DEVELOPMENT: THE CLINICAL AND PATHOLOGICAL ASPECTS. H. GARDINER-HILL, Brit. M. J. 1:1241 (June 19) 1937.

This is one of two articles representing the Oliver-Sharpey Lectures delivered before the Royal College of Physicians of London on March 16 and March 18, 1937, which are published in different numbers of the *British Medical Journal*—a scholarly summation of the knowledge, theories and suppositions concerning normal and abnormal growth. Consideration is given to the differential growth by periods and to the supposed influence of heredity, sex and environment (racial aspects not considered). Particular attention is paid to cartilaginous development and growth due to the influence of the glands of internal secretion, particularly as regards accelerated growth and retarded growth The influence of the various glands of internal secretion is reviewed in brief from the standpoint of stimulation of growth—particularly the direction of growth—and also from the stand-

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point of the retardation. This includes the pituitary, the thyroid, the thymus, the gonadotropic hormones and the pineal gland. Diet is considered, emphasis being placed on the variety and the total quantity. Factors that limit growth are also considered. Then there is a discussion of gigantism, acromegaly, macrosomia and precocious puberty. The juvenile adrenogenital syndrome is considered at some length.

ROYSTER, University, Va.

*ABNORMALITIES OF GROWTH AND DEVELOPMENT: THE CLINICAL AND PATHOLOGICAL ASPECTS. H. GARDINER-HILL, Brit. M. J. 1:1302 (June 26) 1937.

In the second part of his address Gardiner-Hill takes up arrested or retarded development and the history of dwarfism and infantilism. The terms are defined as follows:

Simple Dwarfism:

1. Simple hereditary dwarfism.
2. Simple dwarfism due to developmental skeletal disease: (*a*) achondroplasia, chondro-osteodystrophy and dyschondroplasis; (*b*) osteogenesis imperfecta.
3. Simple dwarfism due to acquired skeletal disease: (*a*) simple rickets and late rickets; (*b*) spinal caries and spinal deformities due to other causes—for example, poliomyelitis.
4. Hypergonadal dwarfism.

Dwarfism and Infantilism:

1. Cachectic.
2. Cachectic infantilism associated with more specific changes at the growth cartilages: (*a*) congenital syphilis; (*b*) scurvy; (*c*) celiac rickets; (*d*) renal dwarfism.
3. Endocrine: (*a*) hypopituitary; (*b*) hypothyroidic; (*c*) hypogonadal.

A brief description of each of these types is then furnished with a statement of the etiology so far as it is known. Most of this statement of the etiology is based on work which has been done by various investigators. Theories not yet proved are discussed and outlined in a brief fashion, with surmises and deductions which are lucid, inviting a reading in their entirety. A good bibliography is appended.

ROYSTER, University, Va.

CLINICAL ORTHODONTIC EVIDENCE OF SYSTEMIC DISEASE. HAROLD J. NOYES, Amer. J. Orthodont. & Oral Surgery p. 27 (Jan.) 1938.

Tracings of roentgenograms made with the Broadbent-Bolton cephalometer illustrate the effect of systemic diseases upon the growing and developing face. The author believes the face to be one of the most sensitive areas of the human body to systemic disturbance and, because of the delicate balance required between growth, development, and function, subclinical disturbances may be most evident through their effect on facial development. The consideration of the systemic condition of the patient is offered as assistance in attaining a more effective and enduring application of the mechanics of tooth movement.

LEWIS, Dayton.

PRINCIPAL FACTORS CONTROLLING DEVELOPMENT OF MANDIBLE AND MAXILLA. KURT H. THOMA, Amer. J. Orthodont. & Oral Surgery p. 171 (Feb.) 1938.

Three theories have been developed by animal experimentation regarding factors which augment inherent growth tendencies. They are: (1) the development of the jaws is due principally to occlusal force during mastication; (2) the development of the jaws

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is governed principally by the development of the teeth; (3) the development of the jaws is fostered principally by muscle activity. The author then shows a case of pseudo-anodontia where all the teeth formed but never erupted. There is no visible evidence of under development of the jaws. In this patient occlusal force was absent; therefore normal development of the jaws was due either to the development of the teeth or muscle function.

Next several cases of true anodontia are recorded, and with artificial dentures replacing the missing teeth and under-developed alveolus the profile takes on a normal appearance, showing that the mandible has developed proportionately in length even though no teeth are present. The author points out that in cases of early temporal mandibular ankylosis, with the function of the muscles of mastication absent, the growth of the mandible is markedly inhibited.

Thoma concludes that the development of the mandible seems to be influenced principally by muscular function and the controlling growth factor for the maxilla seems to be nose breathing through its effect on the pneumatic cavities, and the blood supply of the bone. LEWIS, Dayton.

RELATION OF FUNCTION TO GROWTH & DEVELOPMENT OF THE LATERAL HALF OF THE FACE. SAMUEL J. LEWIS, Amer. J. Orthodont. & Oral Surgery p. 9 (Jan.) 1938.

An analysis of the ideas presented in literature on the question of the interrelation of function and form. Function must take into account the muscular activity involved in the movement of the jaws and the facial expression; the actions of the supporting tissues of the teeth; the problems of the use and disuse of the parts that make up the masticatory apparatus; and the problem of habits both normal and abnormal. The writings of Brash, Todd, Wolff, Waugh, Friel, Rogers, and the author, and the case report of micrognathia of Dunn are mentioned. The author concludes that we have little proof of the part played by function in determining the growth and development of the face; clinical observations indicate function plays an important role in furthering or impeding the inherent factors that produce the adult facial pattern.

LEWIS, Dayton.

*TECHNICAL ASPECTS OF THE ANALYSIS OF BODILY CONFORMATION IN CHILDREN. W. KORNFELD, Acta pædiat. 19:505, 1937. (See Anatomy.)

Habits

THE EFFECT OF THUMB AND FINGER SUCKING ON THE PRIMARY TEETH AND DENTAL ARCHES. S. J. LEWIS, Child Development 8:93-98, 1937.

Study of the primary teeth and dental arches of 30 thumb sucking children over a period of years shows that in all but six instances some deformity of the teeth was present as a result of the thumb sucking habit. When this habit is broken up before the appearance of the permanent teeth the deformities may be trusted to correct themselves. These conclusions are illustrated by photographs of ten sets of dental impressions. (PA, 11:553.) (CDAB 14:72.)

THUMB OR FINGER SUCKING FROM THE PSYCHIATRIC ANGLE. D. M. LEVY, Child Development 8:99-101, 1937.

"Previous observations and clinical studies have demonstrated that the primary cause of finger sucking is insufficient sucking at breast or bottle." "In general psychiatric advice as to the habit has been to ignore it." In cases in which "the absorption in the act is sufficiently great to prevent normal interest in other activities" or in which there is danger of malformation of the jaws, the habit may be broken up by reduction of emotional tension, direct rational appeals to the child, inhibitory devices, or the introduction of substitute activities. (PA, 11:553.) (CDAB 25:130.)

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Histology

INJURIES CAUSED BY ORTHODONTIC FORCES AND THE ULTIMATE RESULTS OF THESE INJURIES. O. H. STUTEVILLE, Amer. J. Orthodont. & Oral Surgery p. 103 (Feb.) 1938.

From histologic examinations of teeth moved orthodontically and then surgically extracted Stuteville believes that root resorption occurs in practically all cases of malocclusion that are treated. His material demonstrates that injuries caused by orthodontic appliances are more theoretical than real since the injured areas usually undergo repair.

The author further claims that the distance through which the force is active, and not the amount of orthodontic force used, is the important factor. He also believes the time elapsing between adjustments is also important, and the forces which act on the tooth due to the interference of the inclined plane during mastication are responsible for most of the extensive injury.

Stuteville differs from Oppenheim in that he assumes teeth can be moved biologically. He assumes this since several of his cases showed no resorbed areas on the surface of the root. LEWIS, Dayton.

Miscellaneous

CRUMBS FROM THE ORTHODONTIC TABLE. A. THORNTON TAYLOR, Internat. J. Orthodont., p. 1102 (Nov.) 1937.

"Confessions and impressions" gathered by the author during his trip around the globe. Orthodontic teaching, extraction, gnathostatics, materials, fixed and removable appliances, case reports, and the question of prophylaxis are covered in this discourse. LEWIS, Dayton.

Nutrition and Metabolism

NUTRITION—ONE FACTOR IN ORTHODONTICS. NINA SIMMONDS, Internat. J. Orthodont., p. 1169 (Dec.) 1937.

Dr. Simmonds declares nutrition has been sadly overlooked by men in the field of orthodontia. She stresses the fact that it is important to see, not only that a child has a highly satisfactory diet, but also that foods are served so that he may eat in comfort. The essayist declares she is beginning to wonder whether faulty nutrition, except as it plays a role in rickets and malnutrition, has so important a role in the causation of orthodontic problems, as a highly satisfactory nutrition prior to, during and after treatment may play in bringing a case to a successful close.

LEWIS, Dayton.

Pathology

*CHRONIC SINUS OF FACE. A. SIMPSON-SMITH, Proc. Roy. Soc. Med. 30:1068 (July) 1937.

A case was reported in a boy of 10 years. The sinus was situated under the right lower eyelid and had been present for three years.. The discharge on cultivation showed no tubercle bacilli but a growth of staphylococcus albus. A roentgenogram showed a little sclerosis of the maxilla at a point underlying the ulcer. The Wassermann reaction was negative. The sinus was curetted more than once. One year after the last treatment it was still discharging. Advice was sought as to appropriate treatment. WILLIAMSON, New Orleans.

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CONTROL OF CARIES DURING ORTHODONTIC TREATMENT. FLOYD E. GIBBIN, Internat. J. Orthodont. p. 1205 (Dec.) 1937.

It is only too evident that control of caries is a joint responsibility of the patient, parent, general practitioner, and orthodontist. The essayist gives instructions for the home care of the mouth. The article illustrates charts and form letters used in his practice. LEWIS, Dayton.

DIASTEMIA OF THE MAXILLARY CENTRAL INCISORS. (Etiology and Pathology.) L. GORNOUEC, La Revue de Stomatologie, p. 30 (Jan.) 1938. (See Etiology.)

*HEREDITARY CRANIOFACIAL DYSOSTOSIS AND TOWER HEAD. E. REISER, Med. Klin. 33:1229 (Sept. 10) 1937.

A case is reported. Reiser thinks that dysostosis craniofacialis hereditaria is the full expression of the symptom complex of tower head. Other types of tower head can be regarded as formes frustes. The facial expression is froglike and the eyes widely separated, and there are exophthalmos and depression of the bridge of the nose. Pathologically the condition is characterized by an abnormally small base of the skull and an increase in its vertical dimensions. In case cerebral growth cannot be accommodated by growth of the skull (evidenced by increase in digital markings roentgenologically) symptoms of increased intracranial pressure may appear. Downward growth of the brain in the occipital region may produce angulation and partial obstruction of the aqueduct of Sylvius and lead to hydrocephalus. Reiser thinks that, in addition to the hereditary factor, limited intrauterine space may be a factor in inhibiting lateral growth of the skull. SIEMSEN, Chicago.

*INCIDENCE OF HUMAN MALFORMATIONS AND THE SIGNIFICANCE OF CHANGES IN THE MATERNAL ENVIRONMENT IN THEIR CAUSATION. P. MALPAS, J. Obst. & Gynaec. Brit. Emp. 44:434 (June) 1937.

The incidence of 2.1 for malformations occurring among 13,964 newborn infants in the Liverpool Maternity Hospital is divided into 1.065 for cerebrospinal anomalies and 1.04 for all other types. Investigation of these cases showed no parental consanguinity. Anencephalus, hydrocephalus, congenital cardiac disease, mongolian idiocy, possibly harelip and cleft palate are more frequent with the later maternal age groups. Other malformations show no definite relation to maternal age. Parity has little relation to malformations except for hypospadias. This is much more common with primiparas than with multiparas.

Malpas believes that all malformations, regardless of type, have as a common etiologic basis abnormal uterine environment in the early weeks of gestation and that the type of malformation is totally unrelated to genetic constitution.

ADAIR and POTTER, Chicago.

MALOCCLUSION CAUSED BY MACROGLOSSIA. MATHEW N. FEDERSPIEL, Internat. J. Orthodont., p. 235 (Dec.) 1937. (See Treatment.)

*RELAPSING FACIAL PARALYSIS IN THE SAME FAMILY. EVELYN JOHNSON and ALBERT V. STOESSER, Arch. Pediat. 54:726 (Dec.) 1937.

Two cases of relapsing facial paralysis in the same family are reported. Otitis media may have been an etiologic factor. ORR, Buffalo.

RHINOLOGIC FACTORS INVOLVED IN THE DEVELOPMENT OF THE LOWER HALF OF THE FACE. HARRY NEIVERT, Amer. J. Orthodont. & Oral Surgery, p. 18 (Jan.) 1938.

A review of the causes and results of nasal pathology, nasal obstructions and allergical conditions. LEWIS, Dayton.

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*Studies in Asthma: The Nose and Throat in Five Hundred Cases of Asthma. F. L. Weille, New England J. Med. 215:235 (Aug. 6) 1936.

Almost one half of the 500 patients were between 30 and 50 years of age. So few children of 10 years of age or less were included that deductions regarding them are worthless.

Sinusitis was seen in 362 of the cases. This frequency should serve to make the rhinologist allergy-minded and the allergist sinus-minded. Severe sinusitis was most frequently observed as a purulent inflammation of an antrum or as ethmoiditis with polypoid degeneration.

Of the 500 patients, 259 had normal tonsils; 186 had chronic tonsillitis, but in only 35 of these was the tonsillitis severe; 119 had had previous tonsillectomy; unfortunately, numerous patients in the latter group had more or less troublesome tonsillar remnants.

Of the 500 patients, 133 had x-ray films of the teeth. In every such case films of all the teeth were taken. In only 84 patients were abscessed teeth discovered, and, of these, only 59 had the abscessed teeth extracted; 39 of the patients were improved or cured, whereas 20 were the same or worse.

A group of 36 patients had bronchoscopy as a part of their treatment; 12 of the patients were improved and 3 were cured; 6 were temporarily cured, but later were the same as before treatment. The remaining ones were not benefited.

It is interesting to observe the results in the asthma in 290 patients who had no form of surgical treatment, whether drainage of sinuses, bronchoscopy, removal of polyps or of teeth, tonsillectomy or other operation. Of these, 142 had slight to severe sinusitis; 15 had pansinusitis; 81 had infected tonsils, and in 20 of these the tonsils were severely infected; 25 had abscessed teeth but were untreated. About two-thirds were improved or cured; the remainder were the same or worse.

Gengenbach, Denver.

Surgical Consideration of Abnormal Frena. Douglas B. Parker, Internat. J. Orthodont., p. 1141 (Nov.) 1937. (See Treatment.)

Traumatic and Functional Injuries Occurring in the Supporting Tissues of Human Teeth. Edgar D. Coolidge, J.A.D.A. & D. Cosmos p. 343 (Mar.) 1938.

A great deal of experimentation having been done on the biologic aspect of the effects of the movement of teeth orthodontically, the author here presents the biological findings resulting from excessive occlusal stress. A splendid review of work done by various investigators in the study of the biology of orthodontic tooth movement precedes the author's findings. Photomicrographs showing the histologic changes which occurred: (1) in the alveolar tissues of deciduous and permanent teeth of a child 11 years of age who was in the process of shedding his deciduous teeth; (2) alveolar tissues about the roots of teeth in people of 51, 54, and 50 years of age. The conclusions expressed are that "functional and traumatic injuries of the root and periodontal tissues resulting from abnormal or excessive stress in human jaws are similar to the experimental injuries produced in corresponding animal tissues; healing of injured periodontal tissue occurs readily when the abnormal or excess stress is relieved, provided that the reparative power of the tissue is not overtaxed by repeated, prolonged insults; loss of the supporting structures may weaken a tooth so that a usually normal stress will prove to be excessive; loss of supporting tissues renders the cementum of the tooth more susceptible to fracture. Histologic examples of all stages of periodontal tissues are presented. The periodontal membrane tends to main-

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tain a constant thickness, if a piece of cementum is torn loose, the periodontal membrane tries to restore its constant thickness to both sides of the torn segment of cementum." STEADMAN, St. Paul.

Physiology

PROLONGED RETENTION: WHEN SHOULD HEALTHY DECIDUOUS TEETH BE EXTRACTED? GEORGE E. MORGAN, J.A.D.A. & D. Cosmos. p. 358 (Mar.) 1938.

Since the processes of growth and development vary in children, and since individuals do not develop with the same rapidity or uniformity on both sides of the body, deciduous teeth likewise do not exfoliate always nor synchronously with the eruption of the succeeding permanent tooth, nor similarly on opposite sides of the mouth. There are three divisions of prolonged retention of deciduous teeth: (1) incomplete resorption of one or more roots; (2) delayed development or absence of the permanent successor; (3) lack of coordination between resorption of the deciduous roots and the eruption of the permanent successor. X-rays show examples of each of these conditions as well as others leading to malalinement of the permanent teeth. Prolonged retention may lead to rotation, displacement, or tipping of the succedaneous tooth. If no resorption occurs on a deciduous tooth and there is no successor, the deciduous tooth may last throughout life and therefore should not be extracted unless for some other reason. When a deciduous tooth does not exfoliate properly, investigate by means of an x-ray before blithely advocating extraction. STEADMAN, St. Paul.

THE STRUCTURAL-FUNCTIONAL ELEMENTS OF NORMAL OCCLUSION. GEORGE H. MAXWELL, Internat. J. Orthodont. p. 1182 (Dec.) 1937.

The purpose of this paper is to demonstrate the correlation of certain well-established physical principles with the structural and functional elements of human dentition, as these applied principles and structural and functional values are found in those examples which analytical observation and experimental evidence have decreed to be nature's standard of excellence. It is indicated that fundamentally there are many factors which contribute to the balance of a tooth, or teeth, in function, and that certain relationships, both separate and coordinate, are spherical in nature and, in certain instances, are actually spherically identical. Dr. Maxwell states that functional activity involves motion, and centric relationship is of no more importance than each and every one of the innumerable instantaneous denture relationships where motion is involved.

LEWIS, Dayton.

Speech

*THE TREATMENT OF CLEFT-PALATE SPEECH. W. K. WARD, South African M. J. 11:433 (June 26) 1937.

The two great difficulties which most patients with cleft palate are faced with are (1) that of preventing nasal emission of breath, which results in the peculiarly unpleasant hollow intonation, and the "fluffy" articulation of consonants which characterizes the speech and (2) that of approximating the velum to the back of the tongue sufficiently to produce the k and g sounds. Ward describes exercises to overcome these difficulties.

GONCE, Madison, Wis.

Technique and Metallurgy

CHROME ALLOY APPLIANCES AND SOLDERING TECHNIQUE. MAX R. KADESKY, Internat. J. Orthodont. p. 1125 (Nov.) 1937.

Gives a soldering technique for chrome alloy and the materials used by the essayist.

LEWIS, Dayton.

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A Continuous Reciprocal Auxiliary Spring. L. B. Higley, Amer. J. Orthodont. & Oral Surgery. p. 163 (Feb.) 1938.

This spring has been evolved through the use of the single wrapped spring, and is used for the expansion of lateral segments and the forward movement of anterior segment.

Lewis, Dayton.

The Orthodontic Cast Band. Ralph Berkson, Amer. J. Orthodont. & Oral Surgery p. 160 (Feb.) 1938.

Presents a discussion of the advantages of the cast band over other molar bands and a technic for its construction. Lewis, Dayton.

Temporo-Mandibular Joint

Radiography of the Temporo-Mandibular Articulation. Albert Djian, La Revue de Stomatologie p. 20 (Jan.) 1938.

A technic involving three fundamental angulations of the tube which provide a serial and comparative radiographic survey of the joint. Other technics may be superior in selected cases. Newcomb, Cleveland.

Treatment

Case of Bilateral Distocclusion. Edward I. Silvers, Internat. J. Orthodont. p. 1122 (Nov.) 1937.

A report of a Class II, Div. I case. History and treatment are given and photographs and models are shown.

Case Report. Willis H. Grinnell, Internat. J. Orthodont. p. 1117 (Nov.) 1937.

The maxillary central incisors of a boy, aged seven years, were knocked out of his mouth; the teeth were replaced in the sockets and wired to a lingual arch. After a period of three years the teeth have not discolored; there are no signs of infection, and they appear to be vital after electric pulp testing. Lewis, Dayton.

Case Report. Eugene J. Kelly, Amer. J. Orthodont. & Oral Surgery p. 155 (Feb.) 1938.

A case report of a Class II, Div. I malocclusion treated with an edgewise arch. Treatment was started with round arches and later rectangular wire arches were used.

Lewis, Dayton.

Cases of Class I and II With Endocrine Involvement. H. L. Morehouse, Internat. J. Orthodont. p. 1212 (Dec.) 1937. (See Endocrinology)

Congenital Absence of Maxillary Lateral Incisors. John Rush Mc Coy, Internat. J. Orthodont. p. 1111 (Nov.) 1937.

Two case reports are presented in which treatment consisted of closing the spaces occasioned by the absent teeth. Dr. McCoy feels that many cases should be handled this way.

Lewis, Dayton.

Coordination—The Final Step in Orthodontic Procedure. Henry H. Trattner, Amer. J. Orthodont. & Oral Surgery p. 1 (Jan.) 1938.

By coordination the author means grinding or rebeveling points and planes of teeth which interfere with lateral movements of the mandible. He believes the patient would automatically bevel off these surfaces if teeth were imbedded in an unyielding substance, but abnormal strain upon interfering teeth produces pericemental irritation and gradual dislocation of these teeth. Lewis, Dayton.

AN EXERCISE TO RESTORE LIP FUNCTION. A. J. LAGROW, Amer. J. Orthodont. & Oral Surgery p. 158 (Feb.) 1938.

This exercise is called the depressor lip exercise because the right and left triangularis and the right and left quadratus labii inferioris are the muscles activated. To perform the exercise, the lips are closed and the depressor muscles are contracted. This brings both lips downward together. The mentalis muscles are compelled to inactivity during the time the exercise is being done and are overpowered. LEWIS, Dayton.

FACTORS WHICH DETERMINE THE ESTHETIC AND FUNCTIONAL POSITIONS OF TEETH. DAVID W. MCLEAN, Internat. J. Orthodont. p. 1096 (Nov.) 1937.

The author believes the important thing for the modern orthodontist is to develop a concept of dynamic occlusion, and to study the patients' dentures in protrusive and lateral relationships, as well as centric, throughout orthodontic treatment. When the utmost has been accomplished by orthodontic treatment, he thinks it logical to reduce the cuspal interference by judicious selective grinding. LEWIS, Dayton.

FACTS, FICTIONS, AND FALLACIES IN ORTHODONTIA. ANDREW F. JACKSON, Internat. J. Orthodont. p. 1073 (Nov.) 1937.

The object of this paper is to show that the facts we possess are sufficient to formulate a system of mental approach and correlated method of treatment which will be quite adequate for practical purposes, without the necessity of resorting to the use of any fictitious or preconceived theories. Structural balance, functional efficiency, and artistic harmony are discussed. The author's treatment consists of having the patient move the jaw until "the position of mechanical advantage" is reached. The appliance is constructed then to overcome the mechanical interference of the teeth in reaching this position. LEWIS, Dayton.

INJURIES CAUSED BY ORTHODONTIC FORCES AND THE ULTIMATE RESULTS OF THESE INJURIES. O. H. STUTEVILLE, Amer. J. Orthodont. & Oral Surgery p. 103 (Feb.) 1938. (See Histology)

MALOCCLUSION CAUSED BY MACROGLOSSIA. MATHEW N. FEDERSPIEL, Internat. J. Orthodont. p. 235 (Dec.) 1937.

Describes the case of a colored house maid, aged twenty-five, who complained of a large swelling beneath the tongue. Her mandibular teeth were gradually separating, she experienced difficulty in swallowing, and it was necessary for her to keep her mouth open to allow the tongue to come forward so she could breathe more freely. A dermoid cyst was removed from between the geniohyoid muscles. Another case is one with a typical muscular macroglossia. Before surgery the tongue rested between the maxillary and mandibular teeth causing a severe open bite. Patient's speech was not clear and he had developed a number of marginal ulcers. After a marginal resection the speech became clearer and the painful condition of the tongue disappeared. No change was noticed in the malocclusion. LEWIS, Dayton.

MECHANICAL TREATMENT OF DENTAL ANOMALIES. B. E. LISCHER, J.A.D.A. & D. Cosmos p. 397 (Mar.) 1938.

A generalized outline of the procedure for caring for orthodontic cases with comments concerning the various phases: examination, diagnosis, treatment. "When the jaws are deformed or arrested in their development and the facial form is involved, we classify the anomaly as dysgnathic and the prognosis is not favorable." When a "mixed denture presents a mere malposition of one or more teeth without malformation of the jaws, we classify the condition as eugnathic and defer treatment to some future time

. . . " Forces applied to the teeth should be controlled and measured . . . Extreme, severe forces produce tissue disturbances which may lead to root resorption, permanent loosening of the teeth, death of the pulp and other pathologic lesions . . . Recent investigations have shown that the forces should also be continuous in action, that intermittent pressure should be avoided if healthy response of the tissues is looked for with confidence." There are two methods of treatment—finger springs, or the banding of each tooth utilizing bracket control. "It should be noted that in each method ligatures are eliminated and frequent visits to the office reduced to a minimum and injury to the gingivae is avoided." Post treatment maintenance varies considerably. "Observation of the patient's denture should be continued at periodic intervals until all of the permanent teeth have erupted and complete and correct anatomical relations have been established." STEADMAN, St. Paul.

MUTILATED BILATERAL DISTOCCLUSION. RUSSELL E. IRISH, Internat. J. Orthodont. p. 1, 21, 8 (Dec.) 1937.

Concise report of a severely mutilated Class II case of a boy eleven years old. Author states he was interested in the case because of its extensiveness in disturbance, and also because of the fact that several men thought it beyond treatment, either with or without removal of teeth. LEWIS, Dayton.

NEUTROCCLUSION CASE INVOLVING CONGENITALLY ABSENT TEETH. WALTER J. SLY, Amer. J. Orthodont. & Oral Surgery p. 151 (Feb.) 1938.

A case report involving the absence of both upper lateral incisors and both lower second premolars complicated by wide diastema between the upper central incisors. It also involved the impaction of the upper right second premolar. Space was created for the upper lateral incisors and the upper premolar. The lower deciduous second molars were extracted at the start of treatment and the space retained. Final retention in the maxillary arch was by means of bands on the upper first premolars with lingual wires to engage the first molars; lateral facings were soldered to this lingual wire. The lower second premolar spaces were retained by cast restorations.

LEWIS, Dayton.

ORTHODONTIA IN RELATION TO PROSTHODONTIA. JEROME M. SCHWEITZER, Amer. J. Orthodont. & Oral Surgery p. 129 (Feb.) 1938.

This article discusses the advantages of orthodontic procedures before bridges or large restorations are constructed. LEWIS, Dayton.

PROLONGED RETENTION: WHEN SHOULD HEALTHY DECIDUOUS TEETH BE EXTRACTED? GEORGE E. MORGAN, J.A.D.A. & D. Cosmos p. 358 (Mar.) 1938. (See Physiology)

SURGICAL CONSIDERATION OF ABNORMAL FRENA. DOUGLAS B. PARKER, Internat. J. Orthodont. p. 1141 (Nov.) 1937..

A discussion on the abnormalities of attachment of the labial frenum. The advisability of interfering with these abnormally attached frena seems to be debatable. The methods of surgery are described. The author believes surgical intervention is advisable where the frenal attachment is between the incisors, and that orthodontic appliances should be used soon after the operation to close the space.

LEWIS, Dayton.

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