Abstracts of Current Literature

Dental Caries

*Dental Fluorosis and Caries in London Children. Margaret M. Murray and Dagmar C. Wilson. Lancet 1:98 (Jan. 24) 1942.

In America, Dean and his colleagues proved that in certain groups of children there was a relative immunity to dental caries associated with the intake of natural waters containing fluorine up to 1.8 parts per million. In England, Wilson correlated in a general way the occurrence of fluorosis, as indicated by mottling of teeth, with soils likely to contain fluorine and also the occurrence of mottling and dental caries. She proved that a greater immunity to caries is associated with fluorosis.

Five hundred and eighty-nine children resident in 99 London districts were investigated for mottled enamel and dental caries. The figures obtained show that, including all the grades of fluorosis but excluding the questionable, 28 per cent of the 589 children between the ages of 10 and 15 years had some mottled teeth, and the previously reported negative association of fluorosis and caries was again borne out. Samples of the three main sources of London's water supply were analyzed and the fluorine content found to be low as compared with contents reported from other countries.

Langmann, New York

Endocrinology

*Response to Growth Hormone of Hypophysectomized Rats When Restricted to Food Intake of Controls. Walter Marx, Miriam E. Simpson, William O. Reinholdt and Herbert M. Evans. Am. J. Physiol. 135:614 (Feb.) 1942.

When care was taken to secure an identical intake of food, hypophysectomized rats treated with a purified preparation of the growth factor from the anterior lobe of the pituitary gland gained significantly more weight than the untreated controls. This would indicate that the growth factor caused increased deposition of tissue substance, not as a consequence of increased intake of food but through better utilization of the consumed food. All internal organs examined were heavier in the groups treated with growth preparation. They grew only approximately at the same rate as did the body as a whole, with exception of the thymus, which grew considerably faster.

Nourse, Cleveland

Etiology

*Hereditary Craniofacial Dysostosis. E. A. Vorisek. Am. J. Ophth. 24:1014 (Sept.) 1941. (See Heredity)

*Oxycephaly. Joseph E. J. King. New York State J. Med. 41:2119 (Nov. 1) 1941. (See Pathology)

*Clinical Conditions Arising from Anomalies of Maldevelopments of the Branchial Arches or Clefts. Walter B. Hoover. Ann. Otol. Rhin. & Laryng. 50:834 (Sept.) 1941. (See Pathology)

*The Etiology of Disturbances of Development. Georg Lenart. Ann. paediat. 157:216, 1941. (See Growth and Development)

†Studies on Head Molding During Labor. Howard C. Moloy. Am. J. Obstet. and Gynec. 44: 762-781. 1942. (See Physiology)

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*Roentgenographic Study of Craniofacial Dysostosis. Manual Arce and Francisco Arce. J. Roentgenol. 47:275 (Feb.) 1942. (See Roentgenology)

Growth and Development

*The Growth of Prematurely Born Children of School Age. T. Brander. Nord. med. (Finska läk.-sällsk. handl.) 9:212 (Jan. 18) 1941.

Brander reports on the physical development of 370 premature children at 7 to 15 years of age. The average values for length and weight were found to be below normal, and there was no tendency for this difference to diminish toward the end of school age.

Wallgren, Göteborg, Sweden

*The Etiology of Disturbances of Development. Georg Lenart. Ann. paediat. 157:216. 1941.

In the genesis of malformation, as in the formation of physiologic features, gene content, cytoplasm and environment act together, although not in the same degree. This is not the case only in malformations differing among themselves, as in the same malformation a more genotypical or a more peristatic origin can predominate. Apart from the principal gene, in the genesis of hereditary malformations accessory genes (*Modifikationsgene*) and environment, in other words, the entire genotypical and peristatic milieu, play an important part. In certain cases they cause such a great variability of the gene manifestations, owing to alterations of the penetrability, of the activity of expression or of the specificity, that the very recognition of hereditary factors in the malformations in question can be endangered. In other cases, malformations due to environment can stimulate hereditary malformations. Without the knowledge and use of the results of experimental genetics, of genealogic statistics and of the twin method, no correct prognosis of heredity is possible. The practitioner should accordingly be extremely careful and reserved in giving eugenic advice.

Author's Summary

*Response to Growth Hormone of Hypophysectomized Rats When Restricted to Food Intake of Controls. Walter Marx, Miriam E. Simpson, William O. Reinholdt and Herbert M. Evans. Am. J. Physiol. 135:614 (Feb.) 1942. (See Endocrinology)

Habits

†Finger-Sucking: Serial Dental Study from Birth to Five Years. J. H. Sillman. New York State J. Med. 42:2024-2028. 1942.

On the basis of a study of the dental aspects of 1,000 newborn infants, more than 200 models of their gum pads, and of from 2 to 20 sets of consecutive casts of the dentition of 50 children from birth to 5 years of age, the author found that in all newborn infants the mandible is posterior to the maxilla. From birth to 2 years the mandible grows faster than the maxilla, thus changing the features from those of a baby's face to those of a child's face. After age 2 this relationship of the jaws is generally maintained. Irregularities of teeth are common in the first dentition regardless of the child's sucking habits, and rotation of the incisors and molars are often present even before the teeth erupt.

Heredity

*Hereditary Craniofacial Dysostosis. E. A. Vorisek. Am. J. Ophth. 24:1014 (Sept.) 1941.

Vorisek reports 2 cases of hereditary dysostosis craniofacialis and gives the following summary:

"Two typical cases of Crouzon's disease without hereditary implications are reported. One boy, who was observed for 5½ years, had decompressions of both cranium and orbit with unexpected success. The other boy, observed for only 2½ years, most probably should have decompression at an early date."

W. S. Reese [Arch. Ophth.]

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Miscellaneous

†Impaired Hearing in Children and Size of Adenoids in Relation to Some Anthropometric Data and to Condition of Teeth. Ella Langer. Annals Otol., Rhinol. and Laryngol. 51:931-935. 1942. (See Pathology)

Nutrition and Metabolism

*Mouth Lesions in Monkeys Associated with a Chronic Deficiency of (1) Calcium, (2) Vitamin C, and (3) Both Calcium and Vitamin C. H. F. Fraser. Pub. Health Rep. 57:968 (June 26) 1942. (See Pathology)

Pathology

†Impaired Hearing in Children and Size of Adenoids in Relation to Some Anthropometric Data and to Condition of Teeth. Ella Langer. Annals Otol. Rhinol. and Laryngol. 51:931-935. 1942.

The results of hearing tests and physical examinations of 1,365 children, 8 to 14 years of age, were analyzed. No relationship was established between hearing acuity or presence or size of adenoids and height and weight for age, shape of head or face or condition of teeth.

*Roentgenographic Study of Craniofacial Dysostosis. Manuel Arce and Francisco Arce. J. Roentgenol. 47:275 (Feb.) 1942. (See Roentgenology)

*Roentgenographic Diagnosis of Congenital Syphilis in Unerupted Permanent Teeth. Bernard G. Sarnat, Isaac Schour and Robert Heupel. J.A.M.A. 116:2745 (June 21) 1941. (See Roentgenology)

*Oxycephaly. Joseph E. J. King. New York State J. Med. 41:2119 (Nov. 1) 1941.

Four cases of oxycephaly are reported in which a plastic operation on the skull relieved the deformity to a certain extent and improved the vision and mentality. In this operation the skull is cut in a checkerboard or mosaic plan, by which the deformity is decreased and the pressure relieved. The physical and mental improvement occurs early after the operation. The operation is not recommended for patients with microcephaly or for idiots.

Aikman, Rochester, N.Y.

†Rehabilitation of the Cleft-Palate Child. Cloyd S. Harkins. J. Except. Child. 9:98-106. 1943.

The author discusses the causes and types of clefts, surgical and orthodontic treatment, prosthesis, speech training, and psychological and social significance.

†Dental Development in Congenital Syphilis. Bernard C. Sarnat and Noel G. Shaw. Am. J. Dis. Child. 64:771-788. 1942.

A group of 73 patients with congenital syphilis were studied. Twenty-two (30 per cent) had dental changes characteristic of this disease. The effects of congenital syphilis are different in the growing deciduous and permanent teeth. The deciduous teeth, active in the formation of enamel, show developmental disturbances in that structure (chronologic enamel aplasia); the permanent teeth, active in morpho-differentiation, show a disturbance of the dentinoenamel junction, with a resulting characteristic dwarfing of the crown. (From Authors' Summary)

*Clinical Conditions Arising from Anomalies of Maldevelopments of the Branchial Arches or Clefts. Walter B. Hoover. Ann. Otol., Rhin. & Laryng. 50:834 (Sept.) 1941.

Hoover reports on material gathered largely from the Lahey Clinic with respect to (1) variations in the right recurrent laryngeal nerve and the great vessels in the upper

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portion of the chest and the neck; (2) epidermal inclusion (dermoid) cysts; (3) preauricular sinuses, supernumerary cartilages about the ear and maldevelopment of the auricle, external auditory meatus and middle ear; (4) lateral cervical branchiogenic cysts and sinuses, and (5) anomalies of the thyroglossal tract and aberrant thyroid. These conditions are all briefly discussed and the management discussed. The direct innervation of the larynx from the vagus nerve by way of the inferior laryngeal nerve on the right side and the anomalous development of the right subclavian artery from the arch of the aorta on the left, so that it crosses behind the esophagus and presses on it, occur with sufficient frequency that laryngologists should keep the possibility in mind.

M. V. MILLER, Philadelphia [Arch. Otolaryng.]

*MOUTH LESIONS IN MONKEYS ASSOCIATED WITH A CHRONIC DEFICIENCY OF (1) CALCIUM, (2) VITAMIN C, AND (3) BOTH CALCIUM AND VITAMIN C. H. F. FRASER, Pub. Health Rep. 57:968 (June 26) 1942.

Monkeys (Macacus rhesus) maintained for eleven months on natural or processed foods showed little or no evidence of gingivitis. Monkeys whose store of vitamin C or of both vitamin C and calcium were chronically depleted acquired extensive lesions of the gingival and peridontal tissues. If this lesion proceeded only to the stage of inflammation and hemorrhage into the gingiva, vitamin C therapy caused a prompt arrest of the symptoms and restoration of the tissues to normal. A continuation of the condition to the stage of necrosis of the gingiva induced many lesions that did not respond to vitamin C therapy.

There was no evidence that a combination of chronic calcium deficiency and a depletion of vitamin C provoked any oral symptoms which could not have been caused by deprivation of vitamin C alone.

SANFORD, Chicago

*TONSILLITIS AND STOMATITIS CAUSED BY VACCINE VIRUS. GUNNAR ÖRN. Nord. med. (Hygiea) 11:2714 (Sept. 20) 1941.

An unvaccinated girl of 4 years whose brother had been vaccinated with smallpox vaccine nineteen days previously fell ill with high fever and rapidly increasing pustules on the tongue and on the tonsils. The corneal reaction was positive. The child recovered.

WALLGREN, Göteborg, Sweden

*NICOTINIC ACID AND APHTHOUS STOMATITIS. J. DAMIANOVICH and R. RAVIZZOLI. Arch. argent. de pediat. 16:21 (July) 1941.

The authors report on 15 patients with aphthous stomatitis, 11 of them children between the ages of 12 months and 6 years, who were treated with nicotinic acid given by the oral route. The dosage varied between 75 and 200 mg. in twenty-four hours and was divided in three or four doses. It was generally well tolerated. Only 1 patient showed marked capillary vasodilation after a total dose of 75 mg.

The effect was generally prompt, and complete cure was usually accomplished within three days.

Gingivitis is more resistant to the treatment. With this condition additional treatment in the form of topical astringents usually had to be employed. Abundant vitamin B complex was provided in the diet.

SCHULTZ, Chicago

*OXYCEPHALIA IN ONE OF A PAIR OF TWINS. EYVIND EK. Svenska läk.-tidning. 38:2881 (Dec. 24) 1941.

This is a report of a typical case of oxycephalia in a somewhat psychically retarded and epileptic biovular male twin aged 9 years. The other twin, who in all other respects was normal, displayed a slight oxycephalia, and so did the father.

WALLGREN, Göteborg, Sweden

*IMPETIGINOUS STOMATITIS. J. NICOLAS, J. ROUSSET and J. RACOUCHOT. Bull. Soc. de dermat. et syph. 45:499 (April) 1938.

The authors call attention to pyogenic stomatitis associated with impetigo. Three

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cases in the same family are cited. The use of 1 per cent methylthionine chloride (methylene blue) and 10 per cent silver nitrate resulted in rapid improvement.

LAYMON, Minneapolis [Arch. Dermat. & Syph.]

*HEREDITARY CRANIOFACIAL DYSOSTOSIS. E. A. VORISEK. Am. J. Ophth. 24:1014 (Sept.) 1941. (See Heredity)

Physiology

†STUDIES ON HEAD MOLDING DURING LABOR. HOWARD C. MOLOY. Am. J. Obstet. and Gynec. 44:762-781. 1942.

Complete roentgenological studies were made on the heads of newborn infants. Two methods were used for determining the effect of labor on the head; namely (1) comparison of X-ray films obtained immediately after birth by Cesarean section with those obtained for heads delivered through the maternal passage, and (2) comparisons of films obtained from molded heads before and after the use of a compression binder. Particular attention is drawn to changes in the base of the skull, "a region hitherto considered unaffected by the stress of labor." A number of cephalic diameters that are directly affected by the changes in the base of the skull are described.

Roentgenology

*ROENTGENOGRAPHIC STUDY OF CRANIOFACIAL DYSOSTOSIS. MANUEL ARCE and FRANCISCO ARCE. J. Roentgenol. 47:275 (Feb.) 1942.

Modifications of development of the skull as a group are due to pathologic dysostosis or synostotis in the vault causing anomalous development of certain regions of the skull. According to the theory of Isola, the modifications are due to the fact that the skull with pathologic synostosis of a suture develops very little in the direction perpendicular to the affected suture, but in an exaggerated way parallel to it.

Types of skull are discussed according to Isola's classification: trigonocephalic, scaphocephalic, plagiocephalic, platycephalic, acrocephalic and oscephalic. A nonhereditary, nonfamilial group of dysostoses are included, with differential points.

The etiologic factors of this last group are included in some of the following: infectious, traumatic, syphilitic, changes in fetal membrane and fetal hyperthyroidism. Eight cases of cranial and craniofacial dysostoses are presented with roentgenograms. Differentiation between the conditions presented in these cases and those of true Crouzen's disease is given.

Diagnosis is based chiefly on careful study of the sutures to differentiate dehiscence of normal sutures due to increased intracranial pressure and pathologic synostosis.

SQUIRE, Chicago

*ROENTGENOGRAPHIC DIAGNOSIS OF CONGENITAL SYPHILIS IN UNERUPTED PERMANENT TEETH. BERNARD G. SARNAT, ISAAC SCHOUR and ROBERT HEUPEL. J.A.M.A. 116:2745 (June 21), 1941.

Intraoral roentgenograms revealed evidence of congenital syphilis in a 4 year old Negro girl. This was present in the absence of changes in the long bones. Intraoral roentgenography should be added to the means of diagnosing and confirming the presence of congenital syphilis.

HEERSMA, Kalamazoo, Mich.

Speech

†REHABILITATION OF THE CLEFT-PALATE CHILD. CLOYD S. HARKINS. J. Except. Child. 9:98-106, 1943. (See Pathology)

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