

ABSTRACTS

Case Analysis & Diagnosis

A FURTHER STUDY OF TWEED'S BASIC PRINCIPLES AND THE REDUCTION OF BIMAXILLARY PROTRUSION WITHOUT EXTRACTION. ALEXANDER SVED. *Am. J. of Orthodont. and Oral Surg.* 33:363, June, 1947.

In a critical examination of Tweed's principles Sved concludes that: (1) it is not true that in the untreated normal the mandibular incisors are upright over medullary bone, (2) it is true that practically all malocclusions are characterized by a forward drift of the teeth in relation to medullary bones, (3) it is true that the mandibular anterior teeth are more stable if placed upright, but this may be accomplished only if tooth material is reduced, and finally (4) that facial balance can be obtained without extraction.

Sved thinks extraction is resorted to because we have never been able to move the entire dentition distally, and that only a small amount of distal movement is usually needed to make a vast improvement in the facial profile. He introduces an appliance which consists of an acrylic splint and a head cap. The splint covers the palate, the lingual and occlusal surfaces of the posterior teeth and the incisal portion of the anteriors. Two cases are shown in which the appliance played a prominent role in reducing the maxillary protrusion.

A CONCEPT, A COMPARISON, A CONCLUSION. JOHN MATHER JACKSON. *Am. J. of Orthodont. and Oral Surg.* 33:542, Aug., 1947.

Success or failure in orthodontics depends on three factors. The first is structural balance, the physical and esthetic proportion desired between total tooth structure and total bone substance to establish a mechanically stable machine. The second factor concerns functional efficiency which is the mechanical economy making the masticatory system a satisfactory machine. The third factor is that of esthetic harmony, meaning the artistic balance between the masticatory system and surrounding structures.

The position of mechanical advantage is the basis of diagnosis and treatment, the center from which everything radiates.

Lewis, Dayton.

AN ARGUMENT FOR EARLY TREATMENT. EVERETT A. TISDALE. *Am. J. of Orthodont. and Oral Surg.* 33:59, Feb., 1947 (See Treatment and Retention).

A METHOD FOR RECORDING THE KEY RIDGE. SAUL M. BIEN. *Am. J. of Orthodont. and Oral Surg.* 32:619, Nov., 1946. (See Technic and Metallurgy).

ANOTHER CASE OF DISTOCCLUSION. MARK H. PERRIN. *Am. J. of Orthodont. and Oral Surg.* 32:279, May, 1946. (See Treatment and Retention).

CASE ANALYSIS AND TREATMENT PLANNING BASED UPON THE RELATIONSHIP OF THE TOOTH MATERIAL TO ITS SUPPORTING BONE. ASHLEY E. HOWES. *Am. J. of Orthodont. and Oral Surg.* 33:499, Aug., 1947.

From his study of fourteen normal untreated occlusions Howes assumes the upper first premolar width of any arch must be at least 43% of its maxillary tooth mass not including the second or third molars. The width of the jaw at the level of the apices of the maxillary first premolar was recorded from two hundred cases; this measurement is called the "C.F." or canine fossa measurement. The measurement was never smaller than the width of the maxillary dental arch in the same plane. Since the premolar width is held to be at least 43% of the maxillary tooth mass the author claims the C. F. measurement must be at least 44% of the maxillary tooth material if it is to be considered normal.

One hundred twenty-five of the two hundred cases mentioned above were divided into three groups: (1) those having a C.F. percentage relationship of 44 or more, (2) those from 44 to 37%, and (3) those below 37%. Howes stresses the fact that he is working only with widths of the apical base and not lengths and his groups are divided in this manner. Group 1, 52 cases, were treated without extraction. Group 2, 53 cases, had three extraction cases and contains the controversial problem cases. Group 3, 20 cases, were all extractions.

Howes used the Stanton surveying apparatus for determining the apical bases of his cases. Examples of his three groups, and cases before and after treatment are shown with models and their related maps. He states in every case he has surveyed before and after treatment the maxillary apical baselines coincide with slight discrepancies.

Lewis, Dayton.

- CEPHALOMETRIC APPRAISAL OF A CLASS I MALOCCLUSION IN WHICH FOUR FIRST PREMOLARS WERE EXTRACTED AS PART OF THE TREATMENT PLANNED. BERCU FISCHER. AM. J. *6 ORTHODONT. AND ORAL SURG. 32:407, July, 1946 (See Treatment and Retention)
- FACTORS OF INFLUENCE IN PRODUCING A STABLE RESULT IN THE TREATMENT OF MALOCCLUSIONS. ROBERT H. W. STRANG. AM. J. OF ORTHODONT. AND ORAL SURG. 32:313, June, 1946. (See Treatment and Retention)
- THE ADVISABILITY OF EXTRACTION AS A THERAPEUTIC AID IN ORTHODONTICS — AFFIRMATIVE. ROBERT STRANG AND ARTHUR GREENSTEIN. AM. J. OF ORTHODONT. AND ORAL SURG. 33:141, Mar., 1947. (See Treatment and Retention)
- THE ADVISIBILITY OF EXTRACTION AS A THERAPEUTIC AID IN ORTHODONTICS — NEGATIVE. JOHN W. ROSS AND LEUMAN M. WAUGH. AM. J. OF ORTHODONTICS AND ORAL SURG. 33:141, Mar. 1947. (See Treatment and Retention).
- THE LIMITATION OF ORTHODONTIC (2) DIAGNOSIS AND TREATMENT IN THE PERMANENT DENTITION. HAYS N. NANCE. AM. J. OF ORTHODONT. AND ORAL SURG. 33:253, May, 1947. (See Treatment and Retention)
- THE LIMITATIONS OF ORTHODONTIC TREATMENT (1) MIXED DENTITION DIAGNOSIS AND TREATMENT. HAYS N. NANCE. AM. J. OF ORTHODONT. AND ORAL SURG. 33:177, Apr. 1947. (See Treatment and Retention)
- THE TREATMENT OF MALOCCLUSION WITH AND WITHOUT THE REMOVAL OF DENTAL UNITS. SAMUEL J. LEWIS. AM. J. ORTHODONT. AND ORAL SURG. 32:518, Sept., 1946. (See Treatment and Retention).

Dental Caries

(D. C.)

DENTAL CRIES IN CHINA. ALBERT FIELDS. AMER. J. OF ORTHODONT. AND ORAL SURG. 33:85, Feb., 1947.

The statement is made that dental caries is described in Chinese documents of several thousand years ago. A low incidence of caries is found in natives who chew the betel nut despite the general dietary deficiencies. The properties of the betel nut are described fully.

SODIUM FLUORIDE SOLUTIONS. TECHNIC FOR APPLICATION TO THE TEETH. JOHN W. KNUTSON. J.A.D.A., 36:1, Jan. 1948 (See Dental Hygiene and Public Health)

THE PREVENTION OF THE DECALIFICATION OF ENAMEL DURING ORTHODONTIC TREATMENT. ALEXANDER SVED. AM. J. OF ORTHODONT. AND ORAL SURG. 32:373, July, 1946. (See Technic and Metallurgy)

THE PREVENTION OF DENTAL CARIES. HAROLD B. YOUNGER. AM. J. OF ORTHODONT. AND ORAL SURG. 33:462, July, 1947.

Past efforts to explain and control caries have never been successful but Gottlieb recently brought out a logical concept embracing principles recognized as fundamental in other tissues of the body.

Developmental immunity to caries is seldom sufficient to prevent the disease without the help of acquired immunity which results from some unknown factor in the saliva. Since this factor is not known artificial impregnation is needed in caries susceptible mouths. Gottlieb's procedure is described in detail. It consists of saturating the teeth with a ten percent silver nitrate solution followed by a saturated solution of calcium chloride. It is felt by the author that a two per cent solution of sodium fluoride does not have a highly caries-inhibiting effect.

FLUORINES AND THE DECIDUOUS TEETH. L. A. HARDGROVE AND F. A. BULL. J.A.D.A., Vol. 34, Jan 1, 1947

A fluorine study having a twofold purpose: (1) to establish the incidence of caries in deciduous teeth of those who are born and reared in regions where fluorine is naturally present in the public water supply, and (2) to attempt to provide some comparable data whereby those cities which have started to add fluorine to their public water supply will have a standard by which to study the beneficial effects of fluorine by the time that the experiment has been under way for six years. A method was devised to indicate the incidence of caries as related to the numbers of teeth present in the mouth. The results show that the incidence of caries is about one fourth as much in deciduous dentition and about one third as much in permanent dentition in that area where fluorine is sufficiently present as opposed to mentioned locality where fluorine was added to make up the deficiency.

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Dental Hygiene & Public Health

FLUORINES AND THE DECIDUOUS TEETH. L. A. HARDGROVE, AND F. A. BULL. J.A.D.A., Vol. 34, Jan. 1, 1947. (See Dental Caries)

Dentistry and Dental Relations

SODIUM FLUORIDE SOLUTIONS. TECHNIC FOR APPLICATION TO THE TEETH. KNUTSON, JOHN W. J.A.D.A., Jan. 1948, 36:1

This paper covers the technic of application of sodium fluoride solution to the teeth. The procedure is divided into four single steps which are clearly described. The author states that although the duration of the caries inhibiting effect of topically applied fluorides is not fully known, the results of clinical studies continued for three to five years indicate that there is no appreciable loss in prophylactic value with the passage of time. Recommended ages for successive treatments are 3, 7, 10 and 13 years.

W. A. Elsasser,
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ORTHODONTICS IN RELATION TO GENERAL DENTISTRY. J. H. HOVELL. British Dental Journal, Aug. 15, 1947, 83:4

The early recognition of malocclusion, the placing of space retainers when needed, early recognition and correction of pernicious habits, and the recognition of non-erupted and misplaced teeth are all orthodontic problems which must be solved in most part by the general practitioner. The author believes that parodontal diseases which affect individual teeth or groups of teeth with irregular pocketing and alveolar resorption are due primarily to traumatic occlusion of the teeth or to a faulty positioning of the teeth or the entire dental arches upon the apical bone of the jaws. The author has emphasized that orthodontics is more than merely straightening teeth but is concerned with the establishment of a balanced occlusion. Test for traumatic occlusion should be made at the completion of the case and from time to time during the period of retention.

JOEL N. GILLESPIE, San Francisco, Calif.

CHILDREN'S DENTISTRY AND THE ORTHODONTIST. FRANK W. NASH. Am. J. of Orthodont. and Oral Surg. 33:74, Feb. 1947.

Good orthodontic practice can only exist to the degree that it is supported by good children's dentistry. Nash urges orthodontists to take the lead in a campaign to develop parental interest in care of their children. More time in the dental school curriculum for pedodontics, education of school officials in regard to dental service, and changing of school codes in various states are among the recommendations of the author.

Various state laws are quoted to show that school attendance laws operate to prevent dental appointments during school hours.

Etiology

(Et.)

INFLUENCE OF RECENT RESEARCH ON PRESENT ETIOLOGIC CONCEPT OF MALOCCLUSION. LEIGH C. FAIRBANK. J.A.D.A., 36:2, February, 1948.

In this paper, Dr. Fairbank has brought together several sources of orthodontic information.

Salient points are as follows:

1. Interstitial bone growth does not exist.
2. Heredity and environment, at no time in the life of a person, act alone.
3. All inherent factors of heredity and environment must be maintained for normal development of occlusion.
4. Growth of bone in the maxilla and mandible is one of the forms of eruption.
5. The present concept discards Angle's postulate concerning the integrity of the thirty-two teeth in many cases of malocclusion.
6. No growth takes place in the body of the mandible anterior to the first molars after their eruption.
7. All bone growth occurs by surface addition. Orthodontic treatment will not stimulate bone growth.
8. Stability of the dentition is dependent on correct positioning of the teeth over foundation bone.
9. Permanent and lasting results in establishing esthetic and functional occlusion depend on the structural limitations of inheritance, environment and functional adaptation.

W. A. ELSASSER, San Francisco, California

PROGRESSIVE MALOCCLUSION ASSOCIATED WITH DILANTIN THERAPY. ROBERT SWINEHART. *Am. J. of Orthodont. and Oral Surg.* 33:534, Aug., 1947.

This is a case report of a patient first seen at eighteen years of age with a slight malocclusion and slightly hypertrophied gingival tissues. A series of dental casts covering a five year period after the initial casts depict the effect of massive gingival thickening upon the denture. Excision of the hypertrophied tissue brought about a reversion to original positions of the teeth. Continued administration of dilantin after surgery induced a gradual recurrence of the gum condition and an increase in the severity of the malocclusion. The anterior teeth were separated and protruded; the canines, first premolars, and second molars moved laterally, while the second premolars and first molars moved lingually.

LEWIS, Dayton

SURGICAL TREATMENT OF DEFORMITIES OF THE JAW. KURT H. THOMA. *Am. J. of Orthodont. and Oral Surg.* 32:333, June, 1946. (See Treatment and Retention)

Growth & Development

(G. & D.)

GROWTH AND TRANSFORMATION OF THE MANDIBULAR JOINT IN THE RAT I. NORMAL FEMALE RATS. DANIEL A. COLLINS, HERMANN BECKS, MIRIAM E. SIMPSON, AND HERBERT M. EVANS. *Am. J. of Orthodont. and Oral Surg.* 32:431, Aug. 1946. (See Temporo-Mandibular Joint)

GROWTH OF THE MANDIBULAR JOINT IN NORMAL MICE. BARNET M. LEVY. *J.A.D.A.*, 36:2, Feb., 1948.

This study is based on histologic observation of changes due to growth at various age levels in the temporomandibular joints of laboratory mice. Forty-three animals were used in the study. The oldest animal observed was 540 days. The author observed that even though most of the cartilage covering the head of the condyle becomes hyalinized, and calcifies, an undifferentiated zone of cartilage cells persists. Thus the growth potential of the mandible, at least in the condylion area, is not lost with age. The illustrations in this paper are excellent and the description of the growth change at various age levels is unusually lucid.

W. A. ELSASSER, San Francisco, California

Heredity

SOME PSYCHOLOGICAL ASPECTS OF THUMBSUCKING. LORE BLUMENAU. *British Dental Journal*, 83:12, Dec. 19, 1947.

Thumbsucking is a normal and common occurrence in early infancy. There are, however, children who remain confirmed thumbsuckers because they suffer from neurosis and with them thumbsucking has become a symptom of psychological illness. These are unhappy children, and scolding and ridicule will inevitably make the condition worse. An understanding parent may, through increased affection and understanding, remedy the situation. In cases where a poor environment or a neurotic parent is the cause it will be found, in many instances, the child responds to an improved situation at home by giving up his symptom, without having needed any psychological treatment.

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Oral Surgery

INDICATIONS FOR THE REMOVAL OF IMPACTED THIRD MOLARS AT AN EARLY AGE. GLENN R. HILLIN. *Am. J. of Orthodont. and Oral Surg.* 33:302, May, 1947. (See Treatment and Retention)

THE EARLY REMOVAL OF UNERUPTED THIRD MOLARS. PHILLIP EARLE WILLIAMS. *Am. J. of Orthodont. and Oral Surg.* 33:388, June, 1947. (See Treatment and Retention)

Pathology

ORTHODONTIC PROCEDURES IN GROSS DENTOFACIAL MALFORMATIONS. JACOB C. LIFTON. *Am. J. of Orthodont. and Oral Surg.* 33:325, June, 1947. (See Treatment and Retention).

PROGRESSIVE MALOCCLUSION ASSOCIATED WITH DILANTIN THERAPY. ROBERT SWINEHART. *Am. J. of Orthodont. and Oral Surg.* 33:534, Aug., 1947. (See Etiology).

Psychology

SOME PSYCHOLOGICAL ASPECTS OF THUMBSUCKING. LORE BLUMENAU. *British Dental Journal*. 85:12. Dec. 19, 1947. (See Habits)