

## *History repeats itself—Part I*

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Moderns interested in the median maxillary suture story will find that history now repeats itself. In order to bring the compilation of various incidents into proper focus, however, it is well to refer to several events of the past. First, and probably most interesting, is the *Laryngoscope* story, which was published on page 717 of the September, 1967, issue of the AMERICAN JOURNAL OF ORTHODONTICS. This important item is reprinted herewith for the convenience of readers who are interested in the story:

It was at about the time of World War I that several orthodontists (including A. H. Ketcham of Denver, Colorado, and Dr. Bogue of New York City) came out with considerable printed text, reporting the widening of the intermaxillary suture by orthodontic means. Much also was being written in the medical periodicals by such oral surgeons as G. V. I. Brown, of Milwaukee, Wisconsin, and W. H. Haskin, of New York.

Accordingly, in 1912 and 1913, *The Laryngoscope*, an international monthly journal devoted to the diseases of the ear, nose, and throat, published a number of articles concerning the relief of nasal obstruction through orthodontic treatment. As a result of that interest, several orthodontists were asked to contribute articles at the meeting of the Section on Laryngology and Rhinology of the New York Academy of Medicine on March 27, 1912.

Some of the articles read before that meeting were published in a special "Orthodontia Number" of *The Laryngoscope* in November, 1912. The contents of that issue were as follows:

1. The Relief of Nasal Obstruction by Orthodontia—A Plea for Early Recognition on Correction of Faulty Maxillary Development. W. H. Haskin, M.D., New York, N. Y.
2. The Development of the Teeth and Occlusion as Factors in the Development of Facial Bones. Frederick Bogue Noyes, D.D.S., Chicago, Ill.
3. Treatment by the Orthodontist Supplementing That by the Rhinologist. A. H. Ketcham, D.D.S., Denver, Colo.
4. X-ray Measurement of the Permanent Teeth Before Eruption to Provide for Early Regulation of the Dental Arch. Sinclair Tousey, M.D., New York, N. Y.
5. Improved Tonsil Tenacula Constructed on the Principle of a Double-Tined Corkscrew. Joseph D. Lewis, M.D., Minneapolis, Minn.

This number is now a collector's item of no small interest and makes very interesting reading to one who has more than a casual interest in the subject.

Fifty-five years ago the discussion was about whether the contracted maxillary arch should be expanded rapidly (palatal suture separation) or more slowly. During the intervening years, this argument was forgotten, only to return a half-century later.

One interesting aspect of these articles was that the otolaryngologist was concerned with the deviated septum and was impressed by the way "palate splitting" permitted rapid changes in the position of the nasal septum. Today it is being suggested that the nasal septum may be a prime factor in the growth of the maxilla.

The pendulum swings. In medicine and dentistry something new is discovered and later discarded, only to be rediscovered by some succeeding generation.

The original November, 1912, issue of *The Laryngoscope* was presented by its editor, M. A. Goldstine of St. Louis, to the editor of the AMERICAN JOURNAL OF ORTHODONTICS. Howard H. Dukes of Kansas City, Kansas, has collected the "discussion" of these papers published in *The Laryngoscope* in October, November, and December, 1912, and January, 1913. The original issue and the discussions are being presented to the Charles R. Baker Library of the American Association of Orthodontists by the editor in chief of the AMERICAN JOURNAL OF ORTHODONTICS.

In order to re-examine the 1912 physician-dentist discussion and review some of the thinking of that first group on this interesting subject, it may be well to quote from several authors whose works appeared in *The Laryngoscope* discussion of November, 1912. W. H. Haskin, M.D., opened the discussion by expressing his belief that there were many cases, especially in children, in which there was a great need for increased nasal space, regardless of whether or not there were deflected septa. He stated that the majority of these cases could be rapidly relieved by orthodontic treatment.

Victor Hugo Jackson, D.D.S., M.D., of New York, the man who originated the Jackson removable appliance and who had written much about the subject under discussion, then said he was glad that Dr. Haskins had presented a paper on this subject before the Section on Laryngology and Rhinology and that it was being discussed by progressive rhinologists and orthodontists. He added that for a considerable number of years he had been impressed with the importance of harmonizing the work of these specialties, as the interest of each was intimately related and their combined work was needed for the welfare of humanity.

He went on to say :

I have recognized the necessity in some cases of moving the teeth bodily without causing much absorption of the alveolar process, that is, by holding the teeth firm in one position by a part of an apparatus as extensive force is being applied, and move the teeth rapidly before any extensive absorption of the process can take place; this is not impossible, as absorption of the process is rather slow, and any extensive force applied while the teeth are being supported in an upright position takes more of the alveolar process with them in their movement and stretches the bone in the weakest points, or separates the bones at the sutures. At the same time, I have favored with young patients the stretching of the bone at the sutures by definite, light, steady force with a strong spring, using a tracing to indicate the change, so that a slight definite change of force at a time can be made and have each change absolutely accurate and recorded. The stretching of the bone develops the arch by adding bone especially in the region of the sutures, and the alveolar process.

I have usually advised that the nose and throat be examined before regulating the teeth, that adenoids and enlarged tonsils be removed in order that the patient be enabled to breathe more freely and the muscles will help in the movement of the teeth.

T. J. Harris, M.D., said that Dr. Haskin's paper deserved unqualified praise for having brought before the Section a subject of the greatest importance of every rhinologist, and he added that no controversial question as to the wisdom of slow versus rapid spreading should be allowed to enter into the discussion. Dr. Haskin had shown that there was a large gap between the orthodontists and the rhinologists, and there was much to be learned concerning the importance of cooperation between them in work on the nose. All would doubtless agree on

that point, Dr. Harris said, and would be willing to admit that there had been negligence in that respect in the past, and all would also admit that, whichever method was adopted, beneficial results would follow.

E. A. Bogue, D.D.S., M.D., an orthodontist of New York and Paris, seems to have been the man from the dental profession who really assembled clinical records in volume in this department of dentistry. We are also indebted to Howard H. Dukes for assembling much of the Bogue record, which includes a series of eleven articles on "Orthodontia of the Deciduous Teeth," starting in Volume XVIII, October, 1912, of the *Dental Digest* and continuing through Volume XIX, September, 1913.

In the article published in February, 1913, Bogue reported:

In 1871, while spreading an upper arch, I believe I separated the two halves of the upper maxilla, in securing the desired width, thereby also enlarging the nasal passages.

In the March, 1913, issue, he stated:

There are three well-known systems employed in orthodontics: first, a screw across the mouth, attached to the upper arch of teeth and designed to act so promptly, that if possible the two halves of the upper maxillary may be spread apart at the maxillary suture, or in any event that they may be spread enough for a crooked septum to be made straight. This can generally be done in from ten days to two weeks for these very young patients, and without pain if the gum is not impinged upon at any point. A strong expansion arch or other apparatus should be applied to spread the lower arch of teeth synchronously with the upper arch.

The purpose of rapid spreading is to enlarge the nasal passage and permit the nasal septum to straighten; not to correct the irregularities of the teeth. . . . Orthodontic appliances may be attached to the upper screw fixture as well as to the lower spreading fixture if desired, but that must be a matter for each operator to decide according to the exigencies of the case. . . .

It remains, therefore, to select among the various systems something adopted, invented, or modified by recent orthodontists. For my own part, I have used whatever has seemed applicable to the case in hand, but I think the systems advocated by Drs. G. V. I. Brown, Edward Angle, V. H. Jackson, George C. Ainsworth, and Varney E. Barnes embrace nearly all the good qualities that have recently been put before the profession, as well as what in the past has been found useful.

In various articles of the series Bogue presented detailed descriptions (illustrated with case reports and photographs of patients and models) of the Brown upper screw fixture, the Ainsworth expansion appliance, and the Jackson appliance. In one article he stated: "The most that can be expected from any appliance is that, if neglected, it will do no harm, and that quality is possessed by the Jackson appliance."

In October, 1967, a little more than a half-century after that early discussion, the subject came up again when the Southwestern Society of Orthodontists held its annual meeting in Kansas City, Missouri, under the leadership of President Howard H. Dukes. Robert M. Ricketts presented a paper entitled "The Rationale of Palatal Suture Separation," following which a panel consisting of Dr. Ricketts (an orthodontist), C. H. Steele (an otolaryngologist), and Robert C. Fairchild (a pediatrician) discussed the pros and cons of "The Tonsil and Adenoid Problem in Orthodontics." Among the questions discussed by the essayists in Kansas City were the following: What is the importance and function of the tonsil-

adenoid tissue? Why should it not be removed? When it is hypertrophied, does it lead to the "adenoid face"? Does it become a mechanical obstruction which leads to abnormal breathing and swallowing?

Since interest in the rapid expansion of the maxillary area reached its peak early in this century, many orthodontists are obviously interested in what was presented on the subject at about the time the rhinologists were becoming deeply concerned. Accordingly, it is believed that the following bibliography will be of interest.

*Symposium on orthodontia (reported by Weinberger, the late historian)*

Practical Demonstration of Photographs and Specimens Bearing on the Topographical Anatomy of the Upper Alveolar Process and Its Adjacent Air Cavities; Their Functional Significance, and the Therapeutic Value of Modern Orthodontic Treatment.—By the Eastern Association of Graduates of the Angle School of Orthodontia. The American Laryngological, Rhinological and Otological Society, Philadelphia, Pa., May 14, 1912. Participants: Milo Hellman (topographical anatomy), F. L. Stanton (physiology), J. Lowe Young (treatment), E. Santly Butler (treatment), and B. W. Weinberger (bibliography).

*Literature pertaining to orthodontia*

- Angle, E. H.: Orthodontia, Dental Review, p. 171, 1896.  
Angle, E. H.: Classification of Malocclusion, Dental Cosmos, p. 249, 1899; p. 343, 1909.  
Angle, E. H.: Importance of the First Molars in Relation to Orthodontia, Dental Cosmos, p. 173, March, 1903.  
Angle, E. H.: Some Basic Principles in Orthodontia, International Dental Journal, p. 729, October, 1903.  
Angle, E. H.: Some Studies in Occlusion, International Dental Journal, p. 165, March, 1905.  
Angle, E. H.: Orthodontia, Dental Digest, p. 307, March, 1904.  
Angle, E. H.: Bone Growing, American Orthodontist, pp. 61-77, 1910.  
Dewey, M.: Ideal Occlusion of the Teeth, Dental Digest, p. 40, 1906.  
Gough, F. A.: Importance of Dental Orthopedics in the Normal Development of the Child, American Journal of Obstetrics, p. 712, 1909.  
Hawley, C. A.: Function of the Teeth in the Development of the Child, Dental Cosmos, pp. 1053-1066, October, 1910.  
Noyes, F. B.: The Relation of the Teeth to the Development of the Jaws and Teeth, American Orthodontist, pp. 133-1431, 1912; Journal of the American Medical Association, pp. 473-477, 1911.  
Noyes, F. B.: The Alveolar Process, American Orthodontist, p. 103, 1904.  
Noyes, F. B.: A Study of the Periodontal Membrane, Items of Interest, p. 752.  
Oppenheim, Albin: Tissue Changes, Particularly of the Bone, Incident to Tooth Movement, American Orthodontist, p. 57, 1911; p. 113, 1912.

In short, during a period of just a few years, several men presented much evidence indicating that the specialty of orthodontics might offer a great supplementary service in the treatment of certain nasal and maxillary deformities.

It is hoped that another segment of this story, dwelling upon some mechanical appliance phases of the subject, may follow. A number of appliances were used in various attempts to expand the dental arch. Some were very satisfactory; others were not.