The International Journal of Orthodontia

Editor: Martin Dewey, D.D.S., M.D.

VOL. I

ST. LOUIS, APRIL, 1915

NO. 4

ORIGINAL ARTICLES

THE IMPORTANCE OF CORRECTING MALOCCLUSION DURING THE PERIOD OF TOOTH ERUPTION.

A Plea to the General Practitioner.

BY M. N. FEDERSPIEL, B.Sc., D.D.S., M.D.

Professor of Stomatology, Medical Dept., Marquette University, Milwaukee, Wis.

THE correction of malocclusion during the period of tooth eruption is not recognized as it should be by the average dental practitioner. This is largely due to the fact that orthodontic training in the past was along mechanical lines; little or no attention was paid to the forces of occlusion, the relation of the inclined planes, etc. Diagnosing and prognosing were practically ignored, the treatment was a matter of *getting the teeth to look more even* irrespective of their functional and anatomical relations.

Parents who notice their little ones manifesting irregularities of the teeth during the erupting period, call upon their dentist for treatment. The dentist invariably tells the parents to wait, that the child is too young, that nature will do much to help matters, and that after all of the teeth have erupted he will do something. Such advice and soothing dental talk is of the most damaging kind, and unless given prompt attention, the child will suffer the stigma of a crippled arch, malposition of the teeth and sometimes a pronounced facial deformity.

The writer hopes to impress upon the reader that in order to give advice and to outline the treatment in malocclusion for his patient, he must first disregard mechanical appliances. To begin with he must have in mind a normal relation of the inclined planes (Fig. 1).

Any deviation from the normal, be it ever so slight, must be considered a form of malocclusion. Then, what is malocclusion? Malocclusion is the abnormal relation of the inclined planes when the jaws are closed.

Malocclusion usually begins during the period of tooth eruption; very often it is progressive, remaining so until all of the permanent teeth have erupted. The period of eruption in permanent teeth must be considered as a critical one in a child's life. It must be regarded as a time when the

relation of the teeth, the dental arches and the adjacent parts will occupy a normal position or an abnormal position of a lesser or greater degree. It is the duty of the family dentist to give the matter deep consideration, to advise the parents whether or not the masticatory organs are developing correctly anatomically.

It is indeed sad to see hundreds of children growing into manhood and womanhood deprived of orthodontic treatment so necessary to the establishing of normal dentition and a pleasing appearance. One has but to study the mouths of our young Americans and see the frightful arrested developments of the dental arches and jaws in the majority of the children. Such conditions are but the first steps to a progressive malocclusion, which will, as time goes on, become greater and manifest a tendency to ill-health. Mal-

Fig. 1.—Showing a normal relation of the teeth.

occlusion and dento-facial deformity once established and fixed remain so during life. The countless thousands in all walks of life are but living examples of a crippled dental apparatus. It tells the story of what might have been under the care of competent men, at a time when orthodontic treatment would have been favorable to a permanent cure. While it is true that much can be gained in improving the condition of the mouths of adults suffering from malocclusion, the prognosis usually is unfavorable. Therefore, it is the duty of orthodontists to advise and educate the public to the idea that, in order to establish a permanent cure in malocclusion, the treatment must be administered during the period of tooth eruption.

Figs. 2, 3, and 4 show the upper and lower jaws exposed so that the position of the teeth can be seen during eruption. The reader can appreciate

Fig. 2.—Showing upper and lower jaws with outer plate dissected away to show the developing permanent teeth and the deciduous teeth in normal relation at about the fourth year of life.

Fig. 3.—Showing upper and lower jaws with outer plate removed to expose the developing permanent teeth. Note the tendency of the deciduous teeth to spread apart to make room for the permanent teeth at about the sixth year of life.

the necessity of jaw growth to permit room for the teeth to occupy their normal position. Interference with the normal growth will naturally deflect the erupting tooth from its normal path and may start the first step of progressive malocclusion. Therefore, it is necessary to begin orthodontic treatment promptly and guide the malposed tooth into its normal path and prevent other teeth from assuming positions of malocclusion. Such a procedure assures the patient of a normal denture and a pleasing appearance.

I have often been asked when I would undertake a case for the correction of malocclusion. My answer is: the younger the patient, the better and easier the correction; in other words, just as soon as the child manifests a tendency for the teeth to erupt in an abnormal position. This can be illustrated in the following case:

Fig. 4.—Showing upper and lower jaws with outer plate removed to expose the developing permanent teeth. Note the eruption of some permanent teeth and the need of plenty of room in the arch for those teeth to erupt normally at about the eighth year of life.

Case 1.—Gladys P., age ten years, referred to me by her family dentist for orthodontic treatment. All of the child's teeth had not erupted at this time, yet there was the beginning of a pronounced malocclusion. The upper permanent incisors were in linguoversion, complicated by the early loss of the upper right deciduous cuspid. In order to prevent further progress of the deformity, the child was promptly placed under orthodontic treatment. It took eighteen months to develop the upper jaw and restore the teeth to their normal occlusion. (See Fig. 5.) I doubt if any such results could have been obtained had the child been older when the treatment was begun.

I wish to call your attention to the two following cases:

Case 2.—Donald C., age nine years, referred to me by his family dentist

for orthodontic treatment. Diagnosis—Distocclusion, complicated by malposition of the upper incisors. This boy was given immediate orthodontic care and after one year I succeeded in getting the arches in a normal relation, and then the teeth erupted in a normal position. (See Fig. 6.)

Case 3.—Margurette M., age ten years, referred to me by her family dentist. Diagnosis—Distocclusion, complicated by a malposition of the

Fig. 5.—Showing result of early orthodontic treatment. A. Before treatment. B. After treatment. Age ten years.

Fig. 6.—A. Showing a tendency for malocclusion to progress. B. Result after treatment. Age nine years.

upper and lower incisors. The patient was put under orthodontic care and in ten months I succeeded in establishing a perfect relation of the arches and teeth. (See Fig. 7.)

While the above case refers to patients manifesting malocclusion during the eruption of the permanent teeth, let me call the reader's attention to the fact that it is important to give due consideration to the dental arches before the permanent teeth erupt. It is also important that dentists get

the habit of recognizing abnormal development of the dental area and the adjacent structures. I do not refer to the decay of the baby teeth alone, but to the relation of the position of the teeth and arches, and the importance of looking for any pathological conditions that may exist in the nose, such as enlarged adenoids, tonsils, deflected septums, hypertrophy of the turbinates, etc. This is very important and I cannot urge dentists too forcibly to give this matter serious consideration.

Fig. 7.—A. Showing malrelation of the arches and malposition of the teeth progressing. B. Result after treatment with a normal relation of the teeth.

Fig. 8.—A. Showing expansion of upper arch to give room for the permanent teeth and to provide room for the tongue. B. Result after treatment. Note first permanent molar has erupted. Age five years when treatment was begun.

I desire to call the reader's attention to a very interesting case.

Case 4.—(See Fig. 8.) This patient was brought to me with the complaint that she was a mouth-breather. She had had her adenoids and tonsils removed by the family rhinologist, but this failed to improve her breathing. Age five years. Upper arch very narrow. The removal of the primary condition was necessary; but it did not cure the mouth-breathing,

because the contracted arches did not permit enough room for the tongue when the mouth was closed. In this case the upper arch was widened. This procedure gave plenty of room for the tongue when the mouth was closed and permitted normal nasal respiration.

Nasal stenosis in early childhood usually produces damaging results to the dental arches, which leaves considerable contraction. It is therefore necessary that orthodontic treatment should be administered at this time in order to give plenty of room for the tongue when the mouth is closed and to provide sufficient space for the normal eruption of the permanent teeth.

The benefit derived from such treatment is difficult to appreciate. It is of the greatest value and might be called preventive orthodontics.

To recapitulate, I have the following to say:

1. That nasal stenosis usually produces contracted arches of deciduous teeth.
2. That the remedying of nasal stenosis will not cure mouth-breathing if the deciduous arches are contracted.
3. That the rhinologist and orthodontist must co-operate in giving relief to nasal stenosis complicated by contracted arches.
4. That expansion of contracted deciduous arches will help to prevent the permanent teeth from erupting abnormally.
5. That the malocclusion of the teeth should be corrected during the period of tooth eruption.
6. That the prognosis of orthodontic treatment during the developmental stage is favorable.
7. That the postponing of orthodontic treatment until after the permanent teeth have erupted may then be unremediable.

MALOCCLUSION OF THE TEMPORARY TEETH.*

BY ANGELO CHIAVARO, M.D., D.D.S.

Official Professor of Dentistry in the Royal University of Rome.

IN THE dental dispensary of the Royal University of Rome, and in my private practice, I have noticed that the malocclusion of temporary teeth is far from being uncommon.

Since 1900, E. A. Bogue, of New York, has been of the opinion that "the position of the deciduous teeth affects the permanent teeth, and that therefore any irregularities in the deciduous teeth should be corrected, in order to prepare the way for the permanent teeth"***; and in 1908, he wrote, that "if irregularities are found in the deciduous teeth, irregularities of the same nature, but still more pronounced, may always be expected in the permanent teeth, which are to follow these deciduous teeth."†

The eminent Edward H. Angle, discussing a paper of Frederick L. Stanton, upon "Distal Occlusion of the Deciduous Teeth"‡ repeated, what

*Reprinted from the Transactions of the European Orthodontia Society. Sixth Annual Meeting, London, May 11 to 14, 1913. Edited by the Oester-Ungar, Vierteljahrsschrift fuer Zahnheilkunde, Vienna.

***"Theories Made Facts," The Journal of the Allied Societies, October, 1906.

†"Some Results from Orthodontia on the Deciduous Teeth," Journal of the American Medical Association, January 25, 1908, Vol. I, pp. 267-269.

‡The American Orthodontist, October, 1910.