

DEPARTMENT OF DENTAL AND ORAL RADIOGRAPHY

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It is the object of this department to publish each month original articles on dental and oral radiography. The editors earnestly request the cooperation of the profession and will gladly consider for publication papers on this subject of interest to the dental profession. Articles with illustrations especially solicited.

A RESUME OF CASES TREATED INVOLVING THIRD MOLAR INFLUENCE*

BY DR. H. L. MOREHOUSE, SPOKANE, WASH.

I FEEL that none of us are given to telling the other fellow of our mistakes as much as we should, for by our mistakes we learn the more, or at least we should. Therefore, I have two objects in view in presenting this paper, first to give a report of the cases I told you of two years ago and the satisfaction I have had from them; also to tell some of the disappointing things, not what would exactly be called failures, but delayed successes, for in the end I feel that I have overcome them as far as is within human possibility.

In the paper I gave two years ago, I cited cases where I had extracted impacted lower third molars and upper second molars in order to overcome the force exerted by them which threatened the future permanency of the cases, and many times practically prevented the satisfactory treatment of such cases.

The first case, I reported to you the last time, was that of a girl fifteen years old with a Class II, Division 1 case, in which I found by radiograms badly impacted upper and lower third molars. In the case of the lower thirds they were forcing the first and second molars into a position of supraocclusion and the impacted upper thirds made it impossible for me to obtain satisfactory mesio-distal occlusion. In this case I had the upper seconds removed and the lower thirds, and up to this time I have found no change in the normal relation of the teeth.

The next case was one of Class II, Division 2 in which radiograms disclosed only impacted lower third molars which were causing supraocclusion of the first and second lower molars, giving the effect of infraocclusion of the rest of the teeth. In this case the parents refused to have the lower thirds removed, delaying them for nearly a year, and finally when they were removed, it was apparent that

*Read before the Pacific Coast Society of Orthodontists, February 17-19, 1920, San Francisco, Cal.

Nature had filled in new bone beneath the first and second molars with the result that the teeth never returned to their original position and it was re-treated later in St. Paul as one of infraocclusion of the anterior teeth.

Fig. 3 is a case exactly like the one just described, with the exception of being a Class I case, but in this instance the parents saw to it that the removal of the lower thirds was done immediately upon my advice, and the teeth, after about



Fig. 1.



Fig. 2.

three months, settled back to their original position. When I saw the patient last fall, the normal occlusion had remained absolutely perfect.

Figs. 4 and 5 are of Class II, Division 2 case, mutilated on one side with an unerupted upper second premolar on the other. This case is similar to many that come into our hands, usually with both upper second premolars impacted, the first molars having taken the position of the impacted tooth. This slide will show you the condition that will develop if the first and second molars in these cases are moved to their normal position, namely badly impacted upper third molars and the second molars at such an angle as to be of very little use for mastication. As I told you in the beginning of my paper, this is to be an exchange of confidences and as such I must say that the question has arisen a good many

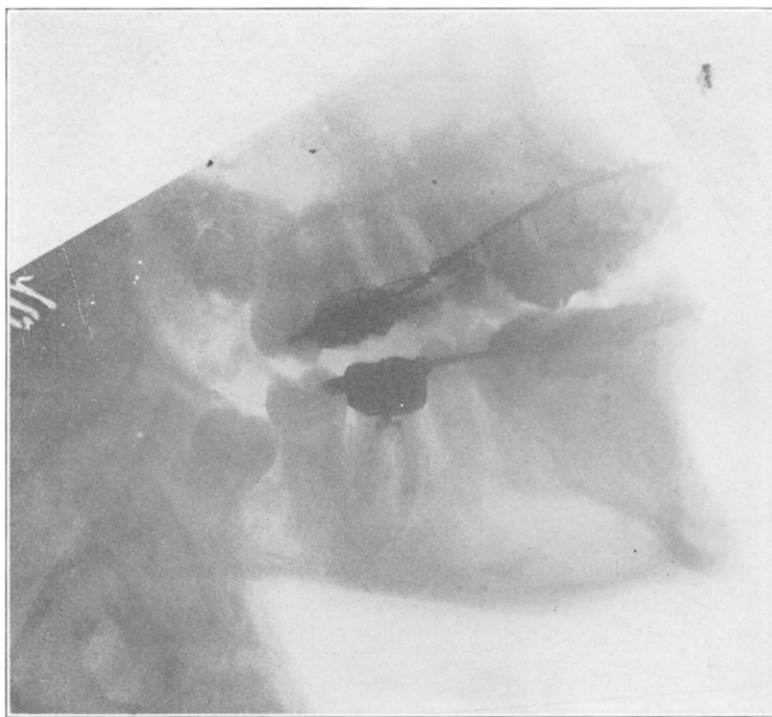


Fig. 3.

times in my mind just what was the proper policy to pursue in such cases as I just mentioned. Is it a more sane policy to extract the upper second molars and make room for the impacted premolars, letting the third molars later on take the place of the extracted second molars, or to advise the removal of the impacted premolars, thus reducing the time of treatment by over half? The last time I made mention of this point those who discussed the paper I think failed to note that I was trying to start a discussion. I hope that they will not overlook the fact this time.

Fig. 7 was one in which I had my greatest disappointment, for after I had treated this case of Class II, Division 1, and the teeth had held perfectly for a number of years, both upper and lower arches began to buckle, and the slide will



Fig. 4.

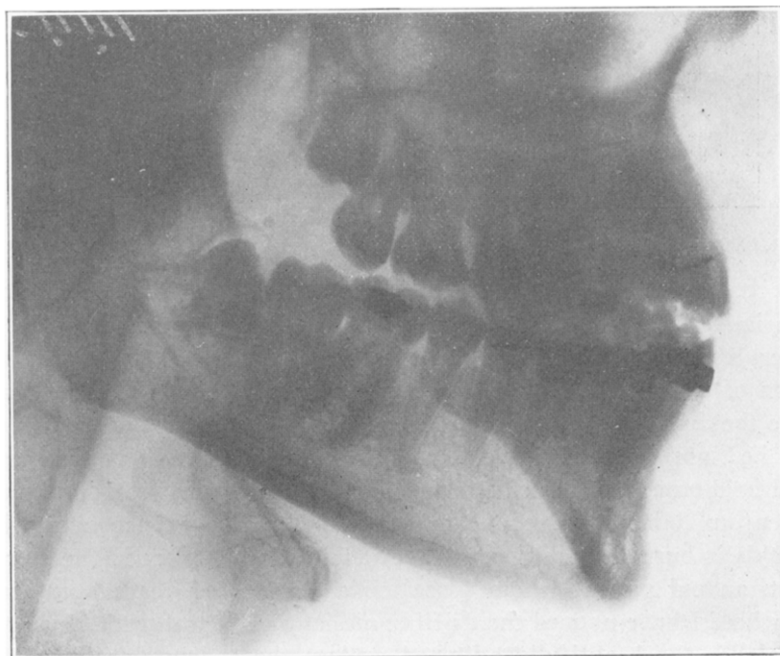


Fig. 5.

show the reason, and even then the parents and the young lady refused to have the third molars removed, and so far as I know have never had them removed, for I refused to be responsible any longer.

In connection with these cases I wish to call attention to those Class II cases in which the symphysis shows a lack of development. I feel that this type of Class II case needs a great deal more careful study, especially from the facial point of view, than any other. Dr. Angle says: "The study of orthodontia is indissolubly connected with that of art as related to the human face." The truth of this statement all of us realize more and more each year we practice, but, like many other things that we know, we lose sight of these ideals at times. It requires continuous study to keep our work up to the proper level, especially when noted artists tell us that we have no permanent standard in America on



Fig. 6.

which to base our judgment, as did the Greeks and Romans, but we must work out each individual case as that type indicated. In an article by Dr. Angle, September, 1903, he stated that the best balance, the best harmony, the best proportion of the mouth in its relation to the other features requires that there should be the full complement of teeth, and each tooth shall occupy its normal position, i.e., normal occlusion. This law in possibly a large percentage of cases will hold true, but since the advent of radiography in orthodontia many of the unseen stumbling blocks have been revealed. Every once in a while the truth of this is burned more deeply in my mind when I meet in the store or on the street, an old patient whom I treated a number of years ago. In every instance where I have noticed the drifting mesially of buccal teeth, thus throwing out of balance the beautifully adjusted arches, the radiograms have disclosed impacted thirds.

The past five years in which I have been studying this condition I have never regretted having advised extractions to overcome the third molar influence. You have all heard the expression from parents and friends of some of your patients, "Jane's face seems too full, I do not think the treatment has benefited her appearance." To such I have endeavored to explain that there are two stages in a child's life in which if Nature has done her duty or has been assisted in creating the normal development of the jaws, the face from a line drawn just beneath the eyes appears to be overdeveloped. These two periods are from four to eight years and from twelve to fourteen or fifteen years.

It has been stated by good authority that the mesio-distal length of the upper and lower jaws should, if normal, have its full development (with the exception possibly of the third molar space), at eight years.

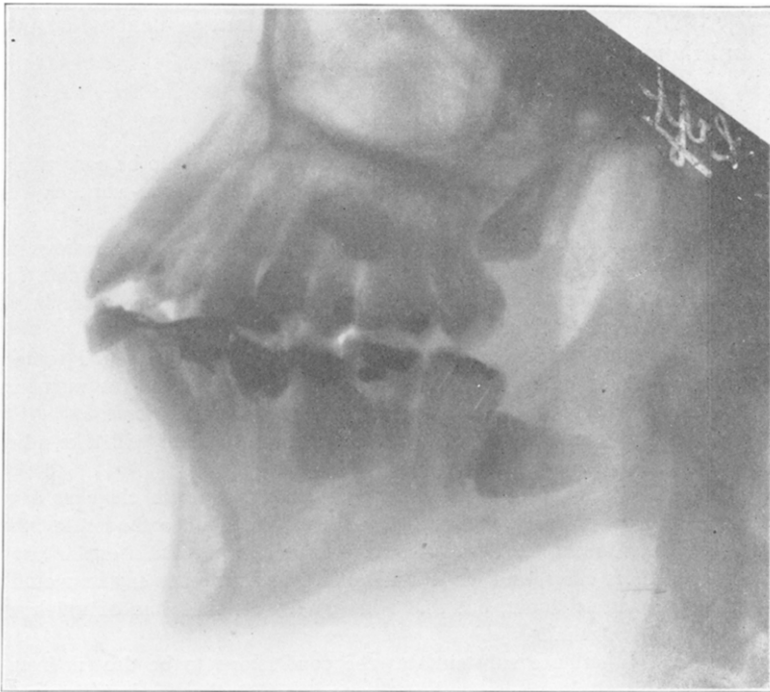


Fig. 7.

Formerly I did not believe that heredity had very much influence in cases of malocclusion, but I am more firmly of the belief that where the maxillary bones proper are involved, hereditary influences could be given as the etiology. One of the effects of this influence is these cases of Class II with undeveloped symphysis, and it is around these cases that I wish most of the discussion could rest.

I have about come to the conclusion that in these types of cases the best thing is the extraction of some teeth in the upper jaw. What teeth these should be cannot be laid down as a hard and fast rule. Here is where you can display your ability as a student of the facial art, in order that the appearance of the receding chin may be reduced to the minimum. (Please note I said appearance). For no matter how perfectly the teeth are moved in normal occlusion

there will still remain a facial unbalance). In a number of these cases I have found that the lower incisors were moved mesially beyond the point of development of symphysis which, of course, would throw into more prominence the look of undevelopment at that point with no hope of Nature overcoming the defect. In these cases I have extracted the upper second molar and allowed the lower teeth to drift distally to harmonize as far as possible the facial balance. This does not make a perfect art balance of the face, but relieves to a great degree what would otherwise be a bad facial deformity with normal occlusion.

The sad part of these cases is that usually the lack of development of the symphysis does not begin to show until about twelve years of age, so it raises the question whether it would give us more satisfactory results if the upper first premolars were extracted instead of the second molars. I have always felt I obtained a better balance of the features by the latter method. These types of cases have been some of the most trying I have had to deal with, because of this facial unbalance over which we have little control.

DISCUSSION

Dr. Leland E. Carter, San Francisco, Calif.—Dr. Morehouse is to be congratulated upon his most interesting and instructive paper. To use an old and time-worn expression "he has given us considerable food for thought."

Here we have a paper of inestimable value to the members of this society, written by one who has been a close observer and who has gathered many valuable facts from years of clinical experience. Theories without conclusive evidence cannot compare in value with such facts as this paper brings forth.

Dr. Morehouse besides giving us some interesting facts has presented some problems for our consideration and perhaps the clinical experience of some of the members of this society may furnish the necessary data from which to draw conclusions.

The paper merits a generous discussion, and I trust all present will take advantage of the opportunity to enlighten us further.

One of the outstanding features of this paper is that it is an eloquent argument in favor of the use of radiograms in connection with all cases of orthodontic interference. Without the x-ray Dr. Morehouse would not have been able to obtain ocular proof of the disturbing factors in these cases, and while I will not go so far as to say he would not have found a solution, there is no doubt, but that radiography relieved him of much worry and made his success more certain.

My own clinical experience substantiates the conclusions to be drawn from the first three cases mentioned and shown upon the screen; i.e., that the third molar is capable of causing malocclusion or preventing its permanent correction by exerting an unnatural force upon the other teeth in the arch, and that when good and sufficient evidence of its disturbing influence is obtainable, we are justified in extracting a tooth to relieve or overcome this force. No hard and fast rule can be laid down to govern these cases. We must take into consideration all the clinical factors and let our experience and judgment guide us in the selection of the tooth to be extracted.

For my own guidance in such cases I have adopted the following rules: First: Do not decide to extract until a careful study and restudy of the case has been made from articulated models and a radiographic survey, and until every available method of procedure without extraction has been carefully considered. Second: If extraction seems unavoidable, adopt the best method of correction without it and when, in the course of the operation it becomes absolutely evident that the desired result cannot be obtained in that way, it will still be time to extract and change the method of procedure.

Inasmuch as Dr. Morehouse has characterized the reading of his paper and its discussion as an exchange of confidences, I must admit that the problems presented in Figs. 4

and 5 have given me no little concern. I must confess that I have insufficient data derived from personal experience upon which to draw conclusions and therefore cannot discuss this phase of the subject in its entirety.

While I have had a great many cases with a premolar impacted on one or both sides, I have never found it necessary to resort to extraction, except the third molar. The proper procedure, of course, depends upon the clinical factors encountered and no hard and fast rule can be formulated covering these cases. We must take into consideration that condition of the investing tissues as well as the erupted and unerupted teeth.

All data and clinical experience in the treatment of these cases is valuable and I trust the following discussion will bring forth some case records.

In reference to Class II, cases complicated by a lack of development in the region of the symphysis menti, I was of the opinion that due to the fact that ossification of the mandible is completed very early in life such a lack of development would be noticeable long before the twelfth year. As to whether or not these cases are the result of hereditary influences there seems to be a considerable difference of opinion. However, I am of the opinion that some of the failures in these cases are due to the fact that the patient allows the mandible to move forward thus overcoming the pull of the intermaxillary rubbers and leading one into believing the teeth have moved. Where the appliances are removed, the jaw gradually moves back into its old position and the case is said to have relapsed. There are some cases, however, that do not seem to respond to treatment, such as Dr. Morehouse has mentioned, and it will be interesting and instructive to hear the views of some of the older and more experienced members of this society.

In conclusion I wish to thank Dr. Morehouse for having given me some very profitable moments, and I am sure that all present are better off for having listened to his paper.

Dr. A. A. Solley, San Francisco, Cal.—I am coming more and more to believe that radiograms are as important as are our models, and I think we should not undertake any case without first getting a complete set of x-rays. In regard to lack of development of the symphysis in Dr. Morehouse's case, I wish I had known he was presenting it as I have a duplicate of it, and it has been under my care about five years. But this one showed up about the fourteenth year, and I thought I had a pretty fair result until a year and a half ago, when the case came back and I had a shock when I saw it. Like Dr. Morehouse, I was quite in despair. However I have placed the patient in charge of a gymnastic teacher. We are trying to get the child to work on the bar, with the chin resting there for support, and see whether that will help. I will promise Dr. Morehouse to give particular attention to this case, and probably in the next year or so can give him complete data.

Dr. John V. Mershon, Philadelphia, Pa.—I am deeply interested in the subject presented by Dr. Morehouse. When a subject is presented to which you agree you think it is well done no matter how bad it may be. This is no reflection on Doctor Morehouse's paper. What impressed me in the pictures and in the presentation of facts by Doctor Morehouse, was how he has proved that the orthodontic problem is not primarily a tooth problem. It is a developmental problem.

Cases that come to the orthodontist present themselves because there is a failure on the part of Nature to develop the human being according to Nature's predesigned plan. If the development of the individual was according to this predesigned conception of Nature he would not come to us. If we could only think in terms of growth and development and not in terms of teeth, and study growth as a problem whether in plants or in the lower animals.

Growth is not continuous, it does not take place in all parts of the body in perfect unison. A child may go on for several years with no increase in girth, but all the increase may be in height. One period may show growth of the arms, then of the chest, you may have it in the face likewise, and we expect when treating our cases with mechanical appliances to apply force with mechanical efficiency, (which should be physiologic efficiency) and have the patients to progress and develop in two or three years to a degree that nature under the most favorable circumstances requires eighteen to twenty years to accomplish in the devel-

opment of the face, it cannot be done. Many patients that we have dismissed at fifteen or sixteen years of age possibly will not arrive at a complement of development until possibly twenty-five or twenty-six years of age. One child may be in a certain grade in school at eight, another at ten or twelve, and so on. We have a mental age, a dental age, and a developmental age, and all may be different.

A diagnosis cannot be made from models. A model is an inanimate thing, it shows only the tooth arrangement.

You must know your individual, you must see your patient and examine him. It is my practice to make a physical examination of the child. With my imperfect knowledge and poor facilities you can imagine how imperfect that examination, and yet I find where I have a marked malocclusion, I can find physical defects in body development. Frequently I can detect a curvature of the spine, lack of muscle tone, and so forth. You will find many children with ankles beginning to show evidence of fallen arches, and you will find the muscles of the mouth weak and flabby. We only treat locally and mechanically the symptoms which are general constitutional conditions.