The Angle Orthodontist

A magazine established by the co-workers of Edward H. Angle, in his memory. . . .

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Illinois Reunion Issues edited by WENDELL L. WYLIE

JANUARY AND APRIL — Editorial Department — 1948

At What Age Should Orthodontic Treatment Start?

Like all other sciences, orthodontia is faced with many unsolved problems and the past twenty-five years have witnessed great strides toward the solution of some of them. Basic research has given us considerable information on how the face grows and develops and clinicians have made many contributions and improvements in mechanical appliances. But in spite of this progress one of the most confusing problems still seems to be, "At what age should orthodontic appliances be placed". The profession has passed through a number of phases in its thinking on this subject. According to our literature we have revised our ideas and methods, most of the time without good scientific reasoning but rather on changes in mechanics and appliances.

There have always existed two schools of thought on this subject and these add confusion to our thinking. One group holds that appliances should be placed as soon as the first erupting permanent tooth asumes an abnormal position, and the opposite recommends waiting until all the permanent teeth have erupted.

It would be wonderful for the orthodontist if it were possible to establish a definite rule as to when treatment should be instituted. The knowledge that has been obtained in the various studies on growth and development, however, indicates that it is highly improbable that such a definite rule will ever be obtained. Orthodontia is a science which will

always present a challenge to its students and every case of malocclusion has problems of its own which demand careful analysis.

Clinical observations have shown that teeth shift after eruption and some apparent malocclusions have developed into good occlusions without mechanical assistance. This was verified scientifically by Broadbent with his cephalometric studies and he referred to it as the "ugly duckling" stage of growth and development. He showed very clearly how the teeth shifted, changed axial inclination and how the denture changed in its relationship to the cranium during its various stages of growth. The shape and size of the teeth are the only static factors with which we deal and we must study and comprehend their positions in relation to a dynamic, developing face.

We are forced to conclude that treatment should be started when the teeth have assumed a relationship to each other which will interfere with normal growth and development. Mechanical locking, abnormal muscular forces, and abnormal function all are factors which will permit a malocclusion to become progressively more severe. Mechanical appliances, sometimes of the simplest nature but applied at the correct time, can correct many of these abnormalities, and thereby guide growth toward normal balanced occlusion. If, after a careful analysis of a malocclusion, the conclusion has been reached that the individual will need mechanical assistance to obtain a good occlusion, the orthodontist should determine when he can obtain the best result with the least mechanical interference. The correct answer to this question will definitely determine the time to start treatment.

The confusion in our thinking has stemmed from the tendency to group cases of malocclusion and to make positive rules for the treatment of each. We now find that we must consider each case as an individual and study the occlusion and growth as such. This demands that the orthodontist have a sound fundamental concept of all the parts of the face and cranium, their relationships and their effect on each other in growth and development.

Such a method of analysis requires in turn adequate courses of study in embryology, anatomy, physiology, histology and the longitudinal study of growth of the face and cranium. These subjects can no longer be looked upon as an intellectual decoration for our orthodontia curriculum or as an educational necessity only for those interested in following research or teaching. They have become indispensable tools of the clinical orthodontists. Orthodontia has accumulated sufficient biological information to make it possible to analyze our malocclusions and plan our time and method of treatment more scientifically. Our knowledge of mechanical appliances has also advanced, but their coordination with our scientific knowledge leaves room for considerable improvement.

The responsibility for further advances in orthodontia remains where it has always been, within the profession itself. Young men who elect the field for their life work should be directed to those schools where they may obtain sound fundamental training in all aspects of the science. The practitioner should keep himself abreast of all advances by a careful perusal of the literature and by attendance on seminars and post-graduate courses. However, he should begin to demand that these be directed toward something other than the learning of new appliances and gadget manipulation. Equal time spent in a consideration of the clinical implications of research findings will frequently pay larger dividends.

S. J. K.