The Application of the Principles of the Edgewise Arch in the Treatment of Class II, Division 1, Malocclusion*

Part II: A Discussion of Extraction in the Treatment of Marked Double Protrusion Cases

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A few remarks pertaining to treatment of double protrusions, which sometimes complicate the treatment of Class II, Division 1 malocclusions, cannot be evaded. Experience in my practice has demonstrated that the most unstable and therefore the most difficult cases to retain successfully are those in which the teeth are too far forward or are in double protrusion. In fact, the usual result after years of retention is relapse, particularly in the lower incisal segment of the arch.

If this is also true in your practices, it behooves us to be more cautious in our treatment so as not to produce this condition.

No truer statement was ever made than Angle's:

> "The best balance, the best harmony, the best proportions of the mouth in its relation to the other features require that there shall be the full complement of teeth and that each tooth shall be made to occupy its normal position—normal occlusion."**

On the other hand, when we are confronted with both a mechanical and a physiological impossibility and find that we have the choice of retaining thirty-two teeth, all out of the line of occlusion, wreaking havoc to a face and possibly a life, or resorting to the removal of all four first bicuspids and placing the remaining twenty-eight teeth in line of occlusion, our procedure should not be difficult to decide upon. There is no branch of the healing art that does not have its limits, and so it is with orthodontia.

When teeth are in double protrusion, I, personally, know of no logical method of treating these cases other than retraction of the dental arches by

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**Angle, Edward H., "Malocclusion of the Teeth," Seventh Edition, Chapter III, p. 63.

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intensive muscular education and exercise; this failing, it is, in my opinion, far better to extract all four first bicuspids and retract the anterior segments by pitting them against the teeth in the buccal segments, intelligently utilizing the vertical spring loop to close the spaces so as not to appreciably dislodge the buccal segments forward.

When we are faced with the necessity of treatment of these cases designated as pronounced double protrusions we must bear in mind that there is a limit both in time and extent to the manipulation of tissues. Otherwise our treatment is liable to be destructive rather than constructive.

For the benefit of those of you, if there be any, who have not at times resorted to extraction in the correction or reduction of double protrusions, let me state that this radical treatment is not the lazy man's way out. More difficulties are encountered in correctly closing these spaces, and by far more time and thought is required than would have been encountered by merely gaining cuspal relationships and overlooking entirely both axial inclinations and facial contour.

Let us all resolve to study more carefully the mechanics possible within this precious mechanism, to the end that we will progress—not stand still or backslide. We must do the thinking, and it must do the work.

Anchorage—one of the biggest words in orthodontia—is not being utilized to its utmost in applying the principles of the edgewise arch mechanism in the treatment of Class II, Division 1 malocclusions, with the result that we are causing more double protrusions than are necessary. This is not the fault of the mechanism. The fault lies in our inability to master its potentialities. Try kicking those lower molars up and back, gaining toe-hold, and then with second order bends do the same to all the bicuspids and cuspids so that you have toe-hold all around, and all of the lower teeth are vertical and stand up like a row of little soldiers ready to work for you without faltering. Keep them in that position, and every time the patient comes in thoroughly examine the mouth to make sure that none of them are slipping. If you can keep them in this position throughout treatment, which is usually possible, you will, when the upper teeth have been moved back to normal cuspal relations, find that you have built the good old chin and that you will have no difficulty in determining which photograph was taken before and which after the treatment of your Class II, Division 1 malocclusions.

Never again will I be unmindful of Angle's words. May I quote:

> "The study of orthodontia is indissolubly connected with that of art as related to the human face. The mouth is a most potent factor in making or marring the beauty and character of the face, and the form and beauty of the mouth largely depend on the occlusal relations of the teeth.

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"Our duties as orthodontists force upon us great responsibilities, and there is nothing in which the student of orthodontia should be more keenly interested than in art generally, and especially in its relations to the human face, for each of his efforts, whether he realizes it or not, makes for beauty or ugliness; for harmony; for perfection or deformity of the face. Hence it should be one of his life studies.

"As orthodontists we must ever place foremost in importance the normal occlusion of the teeth, for only in normal occlusion is their greatest usefulness possible. But many of our patients would never reach us were it not for the inharmony of their facial lines resulting from malocclusion, and if our efforts are intelligently directed we can do far more to render plain or even distorted facial lines pleasingly symmetrical, or even beautiful, than anyone else who has to do with the human face. Indeed the improvement in the proportion and artistic effect which may often be wrought by intelligent effort on the part of the orthodontist is marvelous and almost incredible, but his efforts may also result in producing or enhancing ugliness and deformity if unintelligently directed."[1]

Luhrs Tower

Angle, Edward H., "Malocclusion of the Teeth," Seventh Edition, p. 60.

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