COOPERATION OF GENERAL PRACTITIONER AND ORTHODONTIST.

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The profession of dentistry, while new in comparison with that of medicine, has now reached the stage in its evolution, where for the best interests of the laity, division of labors and responsibilities must be recognized, as was done many years ago in the older profession. About twenty years ago there were occasional minds so impressed with the necessity of more thorough efforts in the correction of malocclusion of the teeth that they decided to limit their practices to work of this kind. From this beginning the specialty of orthodontia developed and was the second specialty in dentistry, being antidated only by exodontia, (known at that time as the specialty of extracting teeth.) Subsequently developed oral surgery, prosthodontia and periodontia. The thought that orthodontia, like exodontia, was so distinct and separate from other dental operations, there being little or no overlapping of labors or responsibilities, was responsible for its being among the first of the specialties to be established in dentistry. How true this is we will see later.

That other specialties will develop there is not the slightest doubt, but just in proportion as there is an overlapping of labors and responsibilities, will difficulties be encountered, for it is but human to blame the other fellow where possible. We are convinced that in the near future there will be those who will give their entire attention and effort to the treatment and filling of root canals. This is made possible by the X-ray, for it would indeed be a bold man who would undertake such a specialty without being able to show in a positive way the results of his labors. That the laity will be better served when such a specialty is established, there is not the slightest doubt, for, the person who is doing any one thing all the time becomes more proficient than he whose attention is divided. As proof of this, consider the many things that are used in the various walks of life, that are made by artisans of mediocre ability but done with such ease and dispatch that the cost of production is very small, compared with what it would be if done by one doing many other things. These artisans become specialists in their particular labors and the products from their hands, when compared with those of the average is vastly superior, notwithstanding the cost of production was less. Who would think in this stage of our civilization to set one man to build a modern house, he to manufacture everything that entered into it, from the raw material? To attempt this would be to set back the wheel of progress centuries.

The first aim of the true professional man should be to serve his clientele in the best possible manner, regardless of his individual requirements or bank account. But some of us will argue that if we followed this course, we would have nothing to do, as Dr. A. is recognized as
the best man in Oral Surgery and Dr. B. the best man in Prosodontia and so on down the line. The answer is for us to become as proficient as any one in our community, in some one or as many branches of our profession as possible and then refer to others such work as we do not feel that we can do in accordance with our ideals, for it is only by so doing that a conscientious professional man can continue in practice. How many of us take this view of our profession, and yet how prone would we be to criticise the medical practitioner who would without any previous training or experience undertake an appendectomy, particularly if the operation was on one of our immediate family and did not prove successful?

It does not follow that if the above conditions obtained, that all dental operations would be satisfactory to the patient, for we differ in ideals as widely as we do in technical ability. But if we are conscientious in our efforts in every operation we undertake, always striving to do it better than the previous one and thus more nearly approach perfection, our ideals will rise in proportion as we improve in our technical ability, and this is the foundation of all professional progress, having always in mind the Golden Rule, "Do unto others as you would have them do unto you."

That we have in every large city in this country one or more specialists in orthodontia and that the number is rapidly increasing, conclusively proves that there are many members of the dental profession who recognize that this work can be better done by the specialist. It might not be amiss for us to consider here why this is so. One teacher of orthodontia has often been heard to proclaim that orthodontia and dentistry are like oil and water and will not mix. But why? Is it that orthodontic operations are more difficult and require a higher order of technical ability or a keener appreciation of the artistic? No. Then why? Orthodontia demands that the malocclusion be corrected. In order for us to correct malocclusion we must have a clear and definite understanding of this ideal condition which we are attempting to restore.

Normal occlusion implies that all the teeth in one jaw are occluding with the teeth in the opposing jaw, so as to furnish the largest area of grinding surface. The cusps, the incline planes, and the sulci into which they fit should combine to furnish the owner with the best masticating apparatus, thus forming dental arches which in regard to strength and durability cannot otherwise be equalled. The cusps of all the grinding teeth in such arches, interlocking with their antagonists, tend to prevent these teeth from any variation in position either bucco-lingually or mesio-distally. This regularity of the teeth in normal arches is also one of the chief factors in their resistance to decay, and to disease of the surrounding tissues, for the teeth, if they are properly formed, are in a position to be as nearly self-cleansing as possible.

With this conception of normal occlusion it is apparent that the loss of one tooth or of even one cusp of one tooth, or to be more exact, the loss of any portion of the mesio-distal diameter, will to just that degree, destroy both normal structure and normal function. It is also apparent to those who have seriously studied this question that it is of equal importance to properly restore the mesio-distal diameter of the deciduous molars where fillings have been inserted on their approximal surfaces. Hence, if we are to properly correct malocclusion, we must have in our minds eye the form, surfaces, and the positions of the dental organs when normal. The value of approximal contact, the proper occlusion of each cusp, the antagonist of each incline plane, the size of each fossa, the shape of each sulcus and the direction of each groove should be known to him who as-
pires to assist nature to establish the normal.

When teeth are in malocclusion we must in some way be able to figure out from the beginning what must be done in order to put them in their normal positions. This can only be done by procuring a set of accurate plaster impressions in order to make casts of both dental arches, so that we can place the teeth of the arches in the position they now occupy and be able to study them from the lingual as well as from the buccal view. It is not a difficult thing to make a set of casts, we hear someone say. No. But the casts are of little value if we do not take time to study them and accurately determine just what is necessary to do. This is where the dentist usually makes his first slip. He does not take the time to accurately figure out what he must do with the teeth in malocclusion so as to place them in occlusion.

Orthodontic appliances to be efficient and comfortable must be so delicate that there is always a possibility of a break, and it is imperative that this should be remedied at once, for teeth relapse much faster than it is advisable to move them during correction. The busy general practitioner finds it difficult to care for these emergencies owing to lack of time with his full list of appointments, and consequently the work is neglected, and possibly forgotten for a time. Slip number two.

It is the duty of the dentist in referring a case to be corrected to see to it that the condition of the oral cavity of his patient is what it should be to receive a set of orthodontic appliances, for it must be remembered that in the majority of such cases, appliances of some sort will be required at intervals if not continually for several years, depending on the magnitude and complications of the case. All carious places should be filled and all roughened or etched enamel surfaces should be thoroly polished according to oral prophylactic standards, so as to place the teeth in the best possible condition to be kept clean and free from bacterial masses during the orthodontic treatment.

It is the duty of the orthodontist before accepting a patient, to impress upon him, the parent or his guardian the importance of thoro cleansing of the teeth, and to clearly and emphatically state that any mechanical appliance placed in the mouth renders them more difficult to keep clean, but that if instructions are faithfully followed, it is quite possible to do so. It is also his duty to see to it that his patient has the proper tools with which to work. There are few adults who effectually care for their teeth. One reason of failure is that they work one tooth brush overtime, never giving the bristles a chance to dry and regain their elasticity. A tooth brush used more often than once during the day becomes inefficient. Brushes should be numbered so that the patient can readily select a fresh brush each time he brushes his teeth during the day.

The orthodontist should be willing to state at the beginning that he will assume the responsibility of guarding against any injury to the enamel surface or to the surrounding tissues under cemented bands, provided the patient will report for inspection at stated intervals. This will tend to make him more careful in his technic in fitting and cementing bands. In order to avoid complications he should emphatically state that it is not uncommon for initial cavities on the approximal surfaces of the teeth to be so small that it is impossible to discover them without resorting to a wide separation, particularly on the mesial surface of the first permanent molars. In fact these teeth are so generally effected owing to the very broad contact formed by the second deciduous molars, that it is almost permissible that he mark on his chart with a question mark, all such surfaces that have not been filled. It is obvious that any dentist can readily dis-
tistinguish the difference between such a cavity and one caused by a loose or ill fitting band, but to the laity a cavity in a tooth that has been banded is blamed on orthodontia and it is the duty of the dentist to enlighten his patients on such points, if he wishes to cooperate to their advantage.

The age at which patients should be referred to the orthodontist is a mooted question, but it is safe to state that ninety-five per cent. of orthodontists will agree that all orthodontic treatment should be completed by the time the permanent teeth, that replace the deciduous ones, are in full eruption. Orthodontia then becomes an aiding process, and the final results the best that can possibly be obtained. It is germane to consider at some length why this is so.

The deciduous denture consisting of twenty teeth is complete at the end of the third year, and when normal, the lower teeth are found to be in a definite relation to the upper ones. The incisors both upper and lower are in contact with their approximating neighbors. By the time the first permanent molars are in full eruption if normal development is not interfered with, there will be a decided change in the size of the deciduous dental arches resulting in spaces in the deciduous incisor region, both upper and lower. Whenever such spaces fail to appear, it is safe to assume that there will not be sufficient room in the anterior part of the arches to accommodate the permanent incisors when they erupt, owing to the fact that these teeth are always considerably larger than the deciduous ones which they replace. This lack of room for the erupting incisors frequently results in what might be justly considered impaction of a number of teeth. That this crowded condition of these teeth is responsible for reflex disturbances which result in baneful manifestations that work to the detriment of the child, is apparent to those who have seriously considered this subject. It is quite common for children at this age to develop habits of various kinds, such as tongue and lip biting, sucking the thumb or finger, biting the nails, biting the cheek, drawing in the lips in various ways, pressing the teeth with the tongue, licking the lips, etc., etc. That these habits are the result of reflex disturbances, it is fair to assume. That such habits influence adversely the positions of the erupting teeth is generally recognized and that if persisted in, the correction of the malocclusion is a useless process, as the teeth are certain to relapse as soon as freed from mechanical retainers.

Physicians have occasionally been known to advocate that infants be permitted to suck the thumb as it prevented mouth breathing but all who have encountered such cases will agree that of the two evils the latter is the easier to correct.

It therefore becomes the duty of every dentist, as well as that of every physician, if he wishes to cooperate to the fullest extent for the benefit of children intrusted to his care, to be ever watchful for such manifestations, so that he may use every possible means to break up such habits at the beginning, for the longer these habits are continued, the more difficult they are to overcome. It is a rare thing to find parents who are cognizant of the habits of their child, and when they are, they have not the slightest conception of the baneful effects of such habits. Wherever possible to ascertain the cause of the habit, the cure becomes far more certain.

As the root of the deciduous tooth is resorbed, the bone surrounding it is also resorbed, and as its permanent successor erupts, new bone develops around it to support it. Owing to the fact that the crown of the erupting tooth projects below the gums before the root is fully formed and, also, that there is never any attachment of any kind to the enamel surface of the tooth, it must be obvious that the pressure required to rotate or
guide such a tooth into its proper position is very much less than that required to move a tooth in full eruption with the bony socket surrounding it fully formed. Is it not logical that when the teeth are guided into their proper positions during the natural eruptive period, so as to place their incline planes in an harmonious relation with their antagonists, that we are assisting nature to the greatest degree? Is it not fair to assume that teeth so moved are surrounded with bone far more normal in cell activity and structure and therefore better able to withstand invasions of disease than where resorption of bone has been induced by mechanical means and the teeth held by some device until new bone has developed to sustain them? Who is there that will dare to assert just how long it is necessary to retain teeth that were in full eruption with their bony sockets and surrounding membranes fully developed before the moving process was instituted?

Observation has proven that wherever it is possible to have finished orthodontic treatment by the time the permanent teeth that replace the deciduous ones are in full eruption, that the buccal surface of the second permanent molars is far less liable to be attacked by decay that where these teeth are present at the beginning of treatment. This of course is due to the difficulty experienced in properly cleansing these teeth with appliances of any kind attached to the buccal surface of bands on the first permanent molars. It likewise follows that it is safer to band the first permanent molars whenever possible for anchorage for the appliance rather than the second deciduous molars, as any attachment on the buccal surface of bands on these teeth renders the first permanent molars more difficult to keep clean.

Other reasons why it is better that treatment should be finished at this age, are, that children do not object to appliances even if they show; that their tissues possess far greater recuperative powers; that the strain of their school work is lighter and that it is finished prior to puberty, which is usually a strain on both male and female.

In the face of the above how can any conscientious dentist advise parents to delay treatment until all permanent teeth are present?

Close observation will prove that children who erupt deciduous teeth early will also erupt the permanent ones early, and if the dentist would bear this in mind, he would be the better able to know just when he should refer his patients so as to assure that they will derive the greatest benefits from orthodontic treatment. In all cases of Class II or Class III malocclusion, if treatment can be started prior to the eruption of the first permanent molars, the final results will be found to be more satisfactory to all concerned.

That many parents consult an orthodontist without being referred by their dentist must tend to prove that the laity are far more interested that their children develop normal occlusion than are their dentists, and it is they who should answer why this is so. The great majority of such children are found to possess pronounced malocclusion and many of their mouths are woefully neglected, both as to oral prophylaxis and filling of initial cavities. Can it be possible that such conditions are due to negligence of the parent? If so, then why are they so anxious about the malocclusion?

Many of these parents cooperate to the fullest extent during the corrective treatment and when referred to their dentist to have the teeth and mouth put in a proper condition to receive orthodontic appliances, it is not infrequent that they return with the statement that the cavities have all been filled to find that prophylactic measures have been neglected and often deep cavities in the occlusal surfaces of the permanent teeth have not been filled. It is obvious that
this places the responsibility for such conditions where it belongs.

As apropos to the subject, we quote from a paper by Dr. Grace Rogers Spalding under the title of "Practical Measures of Preventive Dentistry for the Orthodontist," published in the January, 1917, Items of Interest as follows:

"It is difficult for a specialist in our profession to obtain from the general practitioner that complete cooperation which is so essential to success in the ultimate result. There is no specialty of dentistry which is so dependent upon correct dental restorations as orthodontia. In other specialties, faulty dental operations are usually recognized before irreparable injury has been done, while in orthodontic cases, the shifting of teeth back to their original positions, due to faulty contour, defective contacts and imperfect occlusal restoration is usually so gradual that the occlusion of the teeth may be changed and the purpose of the orthodontist's work entirely defeated before this is discovered.

To offer a solution for this problem is exceedingly difficult, since there will always be dentists and orthodontists. As dental art advances the technic of the individual operator will naturally improve, but the writer believes that the inevitable solution will eventually be the prevention of all cavities for orthodontic patients during as long a period of time as the patient is under the observation of the orthodontist. After this there should be but little difficulty in preventing caries, for such a patient would probably give his teeth, which would then be in normal or nearly normal occlusion that intelligent care which alone can and does prevent dental caries. If only the prophylaxis specialists and the orthodontists could cooperate to such an extent and together care for a sufficient number of cases to verify conclusions according to our present enlightenment in this direction, the result would be a step forward in preventive dentistry."

In this connection it is deemed advisable to insert two quotations from a paper by your essayist, published in the Items of Interest, May, 1913, entitled "Restoration of Occlusion by the Casting Process."

"Did it ever occur to you that the orthodontist often works for years to build up this normal occlusion, only to have it pulled down in a day by the ruthless extraction of a single tooth, or by the lack of restoration of cusp contour or approximal contact in making fillings or inlays?

It would seem, therefore, that the dentist must share the responsibility of the orthodontist in emphasizing the importance of normal occlusion by preserving it at all times, and at least by not destroying it."

"One of the great difficulties experienced by the orthodontist is to retain the mesio-distal relation after it has been established. Very frequently this trouble is due to improper fillings, or inlays, on the occluding surfaces of the teeth, particularly those of the lower first molars. If these restorations can be made so as to accurately reproduce the original shapes of these teeth, and thus permit the large mesio-lingual cusp of the upper first molars to properly seat itself each time the teeth are closed, do you not see what a powerful influence is exerted by the action of the incline planes of this cusp on the incline planes of the cusps of the lower first molar, to prevent a return to a mesial or distal malocclusion, and do you not see that to a proportionate degree each reproduction of the normal occlusal surface of a tooth exerts a like helpful influence? Where all restorations accurately reproduce the original anatomical landmarks, the orthodontist will experience much less difficulty in the retention of such cases."

Occasionally parents who have had their dentist begin treatment of malocclusion for their children, become dissatisfied and consult an orthodontist. In such cases if the appliances are in place,
it is the duty of the orthodontist to refer such a patient back to their dentist so that he may remove them, and not till then is the former at liberty to have anything to do with the case. In like manner a dentist should not for any reason remove for his patient, appliances put on by an orthodontist, but should refer them to the man who put them on for removal, and due courtesy should demand that he communicate to the orthodontist his reason for desiring their removal.

If a patient should decide to change from one orthodontist to another, which he has a perfect right to do, the second orthodontist has no right to consider the case as long as the child is wearing appliances unless he has received permission from the other to proceed with the case.

In all such cases where a patient changes from one practitioner to another for orthodontic treatment, it is the duty of the first operator to deliver to the patient the original casts and photographs if such have been made, (provided, of course, that all financial obligations have been settled) cooperating in every way that will best serve the patient's interest, for it is obvious to every orthodontist that to treat a case without possessing casts of the original positions of the teeth, places him under a handicap, and this is not for the best interest of the patient.

It is not uncommon for dentists in referring a case of malocclusion, to give the parent the names of several orthodontists, so that he may have a choice. This is a practice we cannot too strongly condemn. It is far better that he should decide who would be the most liable to suit the individual needs of his particular patient and send him to that person. The patient will be far better satisfied and the dentist much less annoyed, and he will save himself the humiliation of stating to the patient which one of the number he considers the most competent.