

# THE CORRECT POINT OF VIEW IN OPERATIVE DENTISTRY

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DENTISTS are too much inclined to practice their profession in a routine manner, doing the thing today that they did yesterday, and doing it in the same way. They do not stop to study the significance of their operations or look far enough ahead into the results. They fill a tooth because they discover a cavity in it, and because they know if they do not fill it, the tooth will continue to decay. Too frequently they merely plug the hole in the tooth, and trust providence for the rest. They do not concern themselves with the conditions which surrounded the tooth in the first place to bring about the decay, nor do they operate with the idea of so changing those conditions as to prevent a like decay in the future. As they practice operative dentistry, it is more or less haphazard work, a hit-or-miss system, or a gun-shot dose. They save teeth frequently because they do the mechanical part well, and in doing so they change the conditions without realizing it. How much can be accomplished by an intelligent observation of conditions can only be realized by those who have made a close study of the subject for years, with the idea always of so changing the conditions in the mouth as not only to stop the disease after it has started, but to prevent it before it begins. And this is the correct point of view in operative dentistry.

To intelligently follow out this line of procedure, a practitioner must first recognize the manifestations of susceptibility and immunity in the mouths of his patients, a phase of dental disease which for some unaccountable reason has not claimed the attention of the profession to the extent to which its importance should justly entitle it. In fact one seldom sees reference to this question in our periodical literature; much less does one hear it discussed as a routine topic at our dental gatherings. And yet its significance as a factor in the service which we render our patients is secondary to no other in the whole category of our professional activities.

Every observant individual in the practice of dentistry has noted the fact that there is a great variation in the tendency to dental caries in different mouths, and not only this, but there is a great variation in the same mouth at different periods. This self-evident clinical fact has not made the impression on the profession that it should—in fact, it has been almost entirely ignored. And yet the correct point of view in operative dentistry cannot be conceived without a full recognition of the phenomena presented by the manifestations of susceptibility and immunity in the different mouths that come under our observation.

It has always been a matter of conjec-

ture as to why one mouth was immune and another was susceptible. Manifestly there must be something to account for it, but up to the present time no man has been able to say definitely what the determining factor was. Earlier in our history the profession had developed the very plausible theory that the variation between susceptibility and immunity was to be accounted for by the variation in tooth structure—that the teeth of those individuals who were prone to caries were poorer in quality than were those who were free from decay. This we now know to be a fallacy for various reasons, which need not at this time be considered in detail. We have learned that the chief determining factor in the incidence of dental disease is the question of environment rather than the question of structure. This is really a most fortunate circumstance, because of the hopelessness of so changing tooth structure as to materially affect the tendency to decay. When a tooth is once laid down in the jaw of a child, there is really very little change subsequently in its structure so far as its chemical constituents are concerned, or its relative organic and inorganic balance. The teeth are not constantly being torn down and built up as are other tissues of the body. If a piece of bone is taken away, or an opening made in the soft tissues, nature proliferates new cells to fill in the breach and repair the damage. A section of nerve may be dissected out and nature will reconstruct it. But with the tooth it is different. If a piece of enamel is broken away, nature never builds it up again. If caries occurs in the dentin and forms a cavity it is never filled by the formation of new dentin. It is said that in a given cycle of years all the tissues of the body undergo a complete change by the breaking down of old tissue and the building of new. However, this may be true of the other

tissues, it is assuredly not true of the teeth. Of course, there is, as age advances, a slight relative change in the percentage of organic and inorganic material in the teeth—a growing predominance of the inorganic over the organic—but this is so slight in character as to have little or no effect on the resistance of the tooth to disease.

It will thus be seen how futile any attempt on our part would be to so change the structure of the teeth as to materially affect the tendency to decay in any mouth. But the case is different when it comes to the environment in which the teeth are placed. Even with our present limited knowledge we may reasonably hope to so alter the conditions which surround the teeth that we may bring about immunity in a mouth which previously had been susceptible. And this is an achievement second to none in the whole realm of operative dentistry.

The first and most natural question is, How may this be done? Various attempts have been made in the way of administering drugs to bring about immunity, but up until now with apparently little avail. Back in 1894 I wrote an editorial in which I intimated that the day might come when we would vaccinate for dental caries as we now vaccinate for other diseases, but evidently we are no nearer that today than we were twenty-eight years ago. As the problem appears to me now there are only two ways by which a general suppression of dental disease may be brought about—either by a vaccine which will so affect the body fluids as to render them immune, or by the proper methods of living which shall so build up a resistance that there will be no susceptibility. And frankly, the practical realization of either of these methods is apparently discouragingly dim in the distance. The idea of vaccination for caries seems not to have appealed to any

of our scientific men, altho the late G. V. Black stated, after the appearance of my editorial referred to, that while the idea sounded unique at that time, the day might possibly come when it would be worked out to a successful issue. As to improvement in our modes of living whereby we may prevent these diseases, there seems to be a slightly greater promise. More and more we find men and women interested in the subject of diet as it relates to disease. Everywhere papers are being read before our dental societies dealing with this subject, and it is a most healthy sign of the times. Manifestly the more intelligent we are regarding a proper diet, and the more faithfully we carry out one that is balanced, the nearer we are to the elimination of disease, and yet we must not be foolish enough to claim that if an individual will follow any one diet—even that prescribed by the most expert dietitian—he will thereby be immune from disease. The question is too complicated for this, and there are too many extraneous influences which enter into it, even if it were scientifically proved that a given diet would produce a given result in a given case. That would be very interesting, of course, but it would not settle the question. It would not prove that the same diet would give the same result in all cases, or, in fact, in any appreciable number of cases. Each individual is very nearly a law unto himself, and it is a widely heralded fact that what is one man's food is another man's poison. While the latter assertion is possibly stating it too strongly, still we do know that what agrees with one individual does not necessarily agree with another. This is so true that it has become axiomatic.

Then there is another angle. Supposing it were possible to prescribe a diet that would invariably control dental caries—an achievement which in the

light of our present knowledge is a long, long way from solution—and supposing this were made known to the entire dental profession, how long do you imagine it would be before you could get the large majority of the dentists themselves to faithfully follow this diet? And then after you had converted the dental profession and influenced them to adopt this diet, how long do you estimate it would take them to carry the message to the people at large in such a way that the great mass of the population would adopt it and gain any material advantage from it?

Reforms of this kind are notoriously slow in their evolution, and while we should not abate by one jot or tittle our interest in this subject nor cease in our endeavor to try to throw additional light upon it, still from what we know now there is little prospect that in the near future we may hope for material aid in controlling dental disease either by drugs, vaccines or diet. What then is left to us? We cannot simply throw up our hands and acknowledge that we are defeated. In fact, we are not defeated, provided we take advantage of even the limited knowledge at our present command. While we cannot hope to eliminate dental disease from the great mass of the people in the way we should like to do, yet we can accomplish very material results among the increasingly large number of people who apply to us as patients. But we cannot do this by merely filling cavities in teeth as they come to us and letting it go at that. We should accept every patient who is committed to our care—particularly the young patients—with a sense of the responsibility involved in saving for efficient use a set of natural teeth for life. That we cannot always accomplish this is only an indication of the limitations under which we labor, and yet it can be done in so large a num-

ber of cases that it should constitute the goal toward which we all may work.

If we grant that the chief factor in dental caries is the environment of the teeth, then the question arises how may we so change the environment that the disease is checked. The most effective means we have at our command is thru the application of what in a general way has been termed oral prophylaxis, and yet there is something more involved in it than a mere cleaning of the teeth. Each mouth should be approached in an attitude such as this: The closest search should be made for the beginnings of decay, and for the earliest manifestations of an irritation of the gum margins by the deposition of salivary or serumal calculus, or by rough or uneven margins on fillings. It should be remembered that the condition of the gums has much to do not only with the incidence to those diseases which attack the supporting structures of the teeth, but also with the tendency to dental decay itself. Every cavity should be filled the moment it appears, and caries should be fought precisely as if it were an infectious or contagious disease. At every point where the gum tissue does not readily respond and become normal, search should be made for the cause, and the cause eliminated. Not until every vestige of decay has been cared for, and every source of gingival irritation eliminated should our service to the patient be considered complete.

And then beyond this there is something else. No matter how well we do our work, our duty to the patient is not consummated until we have instilled in the mind of the patient the fact that his share in the care of the teeth is as important as ours, to the end that he will co-operate with us by such daily attention that the service we have rendered will not be made null and void. We should insist always that the most sig-

nificant factor in saving the teeth is the constant care of the patient rather than the occasional care of the dentist. To be sure, the dentist is giving a service that the patient would be powerless to render himself, but no matter how faithfully the dentist does his part, the suppression of susceptibility cannot be hoped for unless the patient co-operates. And this fact should be emphasized to the patient in no uncertain manner.

When once the care of a given mouth has been assumed, the patient must be seen at regular intervals, the frequency of which may be determined by the urgency of each case. All of this has been gone over in sufficient detail by writers in the past, and needs no further repetition here, except to say that some mistaken impressions have been given to patients and some misleading statements have been made. When an operator tells a patient that to have the teeth cleaned once a month by the dentist will absolutely prevent dental decay, he is playing with the facts. In some cases this may be true, but it is assuredly not true in all cases, and it should never be held out as a definite promise to any patient. Sufficient good is accomplished by this service without magnifying it, or in any way distorting it.

There is another feature of this work which has tended to minimize its benefits and limit its widespread acceptance. In the early enthusiasm of the movement in oral prophylaxis some of its advocates were so ill advised as to employ methods which worked irreparable injury to their patients, and left their teeth in worse condition than they had been. There was altogether too much grinding and scraping and trimming. The mania for making everything smooth carried men beyond the bounds of common sense, and they rasped away at the teeth as if they were so many inert masses. The conse-

quence was that they left many patients in such an uncomfortable condition that they were really incapacitated for mastication, and some of them have never fully recovered. Extremes in all things are dangerous—particularly when one is dealing with human tissues—and the harm that has been done by some of these methods cannot be estimated.

But the thing that concerns us mostly at this time is the possibility of a "safe and sane" application of the ideas herein outlined, and their influence on the phenomena of susceptibility and immunity as demonstrated by a somewhat extended observation. This one thing is assuredly true, that the conditions of susceptibility in most mouths can be so largely overcome that patients may be brought to years of maturity with a healthy, serviceable set of natural teeth, and those of us who have had a sufficient tenure of service to enable us to study these things in

actual practice have had the sublime satisfaction of seeing numberless instances where young people in the twenties, or even the thirties, are today enjoying the blessings of a splendid set of teeth with fully efficient mastication, whose parents at the same age, without the benefits of a similar service, had lost many of their teeth and were to that extent crippled for life. This is a demonstration of the utmost significance, and it should prove an incentive to every practitioner to spur him on to a similar endeavor with the patients who come under his charge. The rewards of this kind of effort are beyond estimate, and they are open to every conscientious operator who recognizes conditions as they are, and who applies himself faithfully to the consummation of what is confidently believed to be the greatest achievement in dentistry. And it is all embodied in the title of this paper—"The Correct Point of View in Operative Dentistry."

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