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# Will Your Patients' Dentist Have a Prepared Mind?

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# Will Your Patients' Dentist Have a Prepared Mind?

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**I**F I could have the privilege of a conference with every student in the dental colleges of the United States and Canada, the message that I would want to give to each and every one would have to do with what I believe to be one of the most important problems which concern humanity at this particular moment, and next to humanity, the coming members of the dental profession.

When, about half a century ago, Pasteur gave to the world the revolutionizing new knowledge involved in the relation of microorganisms to health and disease, humanity could not have the benefit of that message for several decades for the simple reason that the healing professions did not have enough knowledge to understand, let alone apply, his message. It is indeed a tragedy that among all the thousands of surgeons in the various civilized countries of the world there was only one with a sufficiently prepared mind to grasp the meaning of bacterial infection and its role in surgical procedure. That man was Lister, later made Lord Lister. He was so overwhelmed by the consciousness of the possibilities that he gave up the balance of his life completely to the interpreting and applying of these new principles to surgical practice. Thank Heaven for a Lister.

When Mendel, an Austrian monk, made the revolutionizing discovery of the fundamental laws of heredity in plants, he announced it enthusiastically to the world through his publications. Is it not heart-breaking to realize that there was not one individual with sufficiently prepared mind to understand his message or to apply it to daily living, and it had to be rediscovered about seventy-five years later, when to the chagrin of the later generation it was found that it had been discovered so many years before.

Only about thirty years ago, thirty-one to be exact, the writer spent this Christmas holiday period in a hospital in a western city, ill with typhoid in an epidemic, in which according to the reports there were 1600 cases developed, or 25% of the population in a town of 6,000, and 600, or 10% died. A consultation was held over my cot between two physicians, one of whom insisted that there was nothing in the germ theory of disease, notwithstanding a large number of his patients (including myself) had as a complication erysipelas.

I remember distinctly my resentment and rebellion at his method of procedure for I had just recently graduated from the University of Michigan. His program was to take his thermometer unprotected from his pocket, put it directly into my mouth, and after making his reading wipe it on my sheet and put it back into his pocket.

I was instrumental in having some of the water of the town, which was taken from the river, sent to Dr. Vaughn at the University of Michigan for analysis. He wired back "Full of deadly typhoid. Be careful." This physician just laughed at the idea though fortunately others took cognizance and looked into the matter and found that the river was frozen to a great depth and the small stream of water running beneath the ice was a dilution of the sewerage from a town upstream in which there were cases of typhoid.

What I am saying regarding that man not having a prepared mind capable of putting into effect the important new data available at that moment is precisely paralleled by our situation of today and tomorrow in dental practice.

Scientific research, as it is developing in various biological fields, including that of dental science, is constantly bringing to light new truths, which would be revolutionizing

if we understood their significance, for a new truth is a new sense, since for the individual who receives it, it makes it possible for him to see things that he could not see before he had that new truth and things which others cannot see who do not have that new truth. To illustrate:

Patients all over the world are going into dental offices and because they look like other people of the same age, sex, and color, they are deemed to be like them with regard to the program that should be carried out. This mistake is made because dentists do not have the new truth; that just as the color of the hair and the height of stature will be determined by heredity and influenced by environment, just so the defense of various structures, as, for example, the heart, for streptococcal infections of the Viridans type will be present or absent as a predisposition, making a difference, in many cases of 20 to 1 of danger between two individuals, who, under our methods of thinking of the past, look alike with regard to their factor of safety in the presence of dental focal infections, which are practically always *Streptococcus Viridans*, whether in association with other organisms or not.

It is neither a reflection upon the men constituting the dental profession of today nor the institutions in which they got their training, that they did not receive an adequate instruction in the fundamental biological sciences. General and special pathology had not been developed or was not being taught in the institutions in the college days of yesterday. Tomorrow the decisions will be made by those who have prepared minds, competent to do so on the basis of biologic determinations as well as on the basis of clinical and history data.

Probably every student now in every dental college of the land has been or will have been taught how to make a differential blood count, yet what good will this do him if he does not have a microscope or retain his knowledge of differentiations and divergencies from normal. At this very moment few of the available procedures for making decisions in difficult and border-line cases are so simple and far-reaching as is the ratio of polymorphonuclears to small lymphocytes and the presence of divergent types of leucocytes, yet this great advance is not available to the dental profession of today for they do not have microscopes except in rare instances, and in all probability not one in a hundred could recognize a normal from a

pathological blood picture if the data were presented. This, I repeat, is not a reflection on them but it will be on the next generation.

Similarly, at this moment it is possible to obtain a great deal of information regarding the progress of calcification and decalcification as well as the progress in the production of what will ultimately be serious systemic involvement as the result of dental focal infections by making serological studies of the constituents of the blood. I am wondering how many dentists there will be ten years from now, who, because they have had the energy and forethought, will be in the position that Lister was in with regard to this matter of the application of serological knowledge to dental science. Remember that those who do not have the new truth will not have the new sense and for them the new truth will always be bunk and they will ridicule it and reconcile, if not justify, their procedure and unimproved methods on the basis of their ignorance rather than on the basis of their wisdom. Remember there are many people living today, even colonies of them, who still believe that the earth is flat, just as there are still those who do not believe in the germ theory of disease, and as there will be ten and twenty years from now those who have not yet got the vision because of lack of capacity or lack of application that it is possible to discern when an individual is in serious, if not grave, danger from dental focal infections long before there is any physical break or clinical symptom as it is now recognized.

My advice to those of you, who have the type of mind that can be prepared, will be to take just as many special courses in normal and abnormal structure and function as the directors of your institution and your physical strength will permit. I would particularly advise that you snuggle up to the biological chemist of your institution as well as to your physiologist and histologist.

Let us suppose, for example, that there comes to the dentist, whom your patients are so confidently trusting (of course I mean to you when you get into practice) a woman with a rapidly progressing case of suppurative periodontoclasia, so commonly spoken of as Riggs' disease or pyorrhea alveolaris. This patient is very refined, has a high sense of pride in her appearance, and like most of such women has a very strong conviction existing as a prejudice against wearing anything artificial in her mouth. Her first concern will be that whatever program may be

carried out it shall include the retention of all of her natural teeth.

In the mind of her dentist to what extent will this be a local problem? Will his knowledge of biological chemistry and carbohydrate metabolism give him a basis for judgment that will make him suspect that this patient may be in the early stages of diabetes, though not necessarily so? Will he know that all diabetics tend to develop periodontoclasia, and that when the blood sugar is high it is almost impossible to make progress in the treatment of the condition; and, further, that the gingival infections become a unit in a vicious cycle and very greatly aggravate the development of the potential diabetes; and, still further, will he know how to determine or find out whether the patient's blood sugar is too high, or will he know normal from abnormal figures? If he does not, this idea will be to him all bunk. If he has a prepared mind, a score of fundamental facts will rush to the fore in his mind and he will see that he must make decisions which may influence or control both this woman's physical comfort and duration of life. He will not have learned in dental journals that diabetes is increasing in prevalence at a tremendous rate in this country, nor the fundamental contributing factors to it.

There is another phase in which the dentist of the next decade or two, who has a prepared mind, will be living in a different world and practicing a different type of dental science than those without the prepared minds, for whereas the dentistry of today and of the past has been almost entirely in the great mass of service rendered the running of repair shops (which in the light of even the knowledge of this moment means that the dental practice of today is in its

truest sense a failure) the dental science of the near future will cease to be that of repair and come to be that of prevention. Only those men with a knowledge of biological chemistry will be able to adapt the great new truths that shall demonstrate the true etiology of caries and periodontal disease, and by the utilization of these new truths make them become new senses which will guide their patients along the course that will prevent these disturbances which constitute the most universal afflictions of mankind.

If I could know the motive that has taken each one of you into this calling, I would know practically to a certainty the extent to which you will make an effort to have a mind adequately prepared to make available to you great new truths as they are discovered. If you are entering the practice of dentistry as a means for obtaining an easy livelihood, this service will be for you simply that of a plumber and caulker. If, on the other hand, you have caught the real vision of life, you will not be dominated by simply the remnant of that jungle instinct, which expresses itself as a supreme struggle for self-preservation, but you will be dominated by a sense of keen joy in removing from the lives of the fellow citizens, who come to you in confidence for that service, those things which they cannot remove and prevent themselves. The former is unadulterated selfishness of the most distinctive animalistic type; the latter is the only thing that justifies a human being considering himself as worthy of that classification.

The measure of the superman is the measure of his new senses that have come to him as new truths.

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