

NORTHWESTERN UNIVERSITY DENTAL SCHOOL

DEAN'S OFFICE

NORTHWESTERN UNIVERSITY BUILDING

CHICAGO ILLINOIS

May 4, 1915.

Dr. F. S. McKay,
Colorado Springs, Colorado:

Dear Doctor:-

I have just finished the reading of your paper, at least of what you sent me; I don't know how much more you may have up your sleeve. There are two or three things that I would like to know.

You speak of "pitted varieties of mottled teeth." Some of these seem to be little pits scattered over the surface. Those are not what I wish to inquire about, but the pits in which caries starts, which you speak of, I have never seen. When I was in your city I saw a great many children, but did not happen to see a single one of these. Now I have a decided expectation that if I had two or three of those teeth and made sections of them, we would find something entirely different from mottled enamel on the inside. The fact is this; a tooth that shows mottled enamel may also show atrophy. In the cases I have cut there are two that show atrophy marks which were so slight on the surface that I did not notice them before the teeth were cut. Now I would like to know if what you call "pitted teeth" are really those which show atrophy. You have undoubtedly seen teeth with pits across them - incisors and cuspids - and apparently very little else the matter with them, or they may have shown only two or three pits. Uniformly such a tooth will show atrophy marks if it is sectioned. These pits are very liable to decay, and as you speak of them in the same way, it has aroused my suspicion. If I could get ^{some} of these teeth, it would not take me long to find out about that, and be certain to be right.

I was very much interested in your search for the cause of mottled teeth. I was perfectly confident that there would be a wild hunt, just as there has been. I think you understood that that was my idea at the beginning, but here is an important fact in relation to it that you have failed to state, briefly and in just so many words; the sentiment of both the profession and the laity in the areas of susceptibility was such that the water conditions had to be investigated; we could not enlist their sympathy in doing anything else at the beginning. A statement like that would attract general attention, and give a very solid reason for all the work that you have done, and done very magnificently.

I think you spend too much time in the discussion of the histological conditions and on the inquiries you have made of men ~~supposed~~ to be histologists - many of them of the very best we have. They have never seen this condition and could give you no information whatever for the simple reason that this condition had never come under their scrutiny. I would mention those gentlemen and speak of the fact that you could not get any information from them regarding this matter because they had not seen the condition, but that you are very grateful for their answers which you did receive, which was very kind of them of course. It would save you something in the length of your very long paper.

recognized

May 4, 1915.

In your discussion of the dystrophies at the beginning of your paper as I now see it, there is liable to be a good deal of confusion in the minds of the readers regarding this, and I am very doubtful about the propriety of giving so much of that. Since I have read the real meat of your paper, it has struck me this way. Your account of your search is the meat of your paper, and you cannot make that greater by discussing anything else. If I were in your position, I would confine myself to that, preceding it with a close and careful description of the clinical conditions.

One thing that is hard for me to reconcile with things as I saw them, is your remark that the white variety of mottled teeth did not mar the patient at all similarly to the dark. All that grows, I suppose, out of the fact that you have continuously had it before your eyes for so long that you have gotten used to it, but to me that was more horrible than the dark colors all the time I was there, and I think it will strike a stranger in that way very generally.

Now I want to say to you that your paper has interested me very much indeed. I haven't known for quite a good while of anything that you were doing, and I was very anxious to get your complete paper so that I might know. As I said to you once I think, I shall not do anything else than describe the histo-pathological conditions, excepting to make some brief statements to give a better idea of what I mean. I am willing to state, if you wish it, that I shall leave all the clinical manifestations, search for causation, etc., entirely to you.

What you have done is a great work, and it seems to me will interest the profession very much. I hardly know how else to express my appreciation of it. It is certainly very great. That there are some faults in the paper that will be difficult for you to work out, goes without saying. It is very hard to write anything of the kind and feel that you have said everything you could say, but when I got to reading your paper, there was no rest until I was done.

Very truly,

G.V.B.

G.V.B.

May 4, 1915.

P.S.

General Appearance of the Children
in the Areas I have visited

There is one thing that I have never seen mentioned, excepting as I have mentioned it, in the areas of susceptibility to mottled teeth, and that is the appearance of the children. The little fellows always seemed very happy, playing continuously in the sunshine, and in my walks I noticed them very particularly. I often remarked that I had not seen one child of the "butter-ball" variety who had been a continuous resident of the area. When I would meet children of that variety it became my habit to ask them where they lived, and universally they told me that they did not live there.

I have spoken of the lank appearance of the children and of the laxity of their muscles, and other such things as that, frequently while I was among them. I was always told that it was considered that the children were very healthy, and certainly the low death rate among them would indicate that. Yet there was always an impression in my mind that there was something else the matter with the children besides what we saw in their teeth. I had no response to this thought, excepting that they considered the children very healthy, which I never denied that I remember of, but generally replied that they seemed very happy; and I would emphasize that statement at any time, that it was true.

The impression that water was the cause of the injury to the teeth, I met on every hand, and any one who reads your paper will find that this cropped out everywhere. This being true, I urged that the water be examined as far as possible while making the survey of areas of susceptibility, but I never for a moment thought that it was the water. I don't know how many remember my expressions on that point; perhaps very few - at least my impression was that it was ignored entirely. This brings me to a rather horrible thought, that perhaps you or those in your districts will receive simply with surprise and pass over as impossible - but it has never been out of my mind during the six or seven years that I have known of this condition, and particularly never since I visited your city - that is, that the condition is microbic and that the areas are infected areas.

I have no intention of discussing this now. It is only called to your mind to see what you remember about it, if anything.

P.S.

Dystrophies

A dystrophy affecting the enamel of the teeth is anything that may cause a malformation of that structure. It may or may not affect the dentin and enamel. There are no dystrophies of the teeth known to me that affect the dentin only. In the classification now being given, each of these dystrophies has its own peculiarities. No two that may be met with are alike in their effect upon the teeth. For instance, mottled teeth which we have been studying, have characteristics of their own that differ from the characteristics of all other imperfections in structure, and as it is with this, so it is with every other one. There would be no reason for a classification unless this were true.

For instance, in atrophy there may be a very considerable distortion of the tooth's crown, or so little that most persons would pass it over as a perfect crown. Yet when a section is made a mark is found that passes through the enamel, following accurately its accretion lines until it reaches the dento-enamel junction; then it is reflected in the dentin, passing through the accretion lines of that tissue to the other side, where it again passes into the enamel, making an exit opposite the starting point. This is said of course of a section through a tooth.

There is no other dystrophy that has this peculiarity. Each of the others that are mentioned in my Operative Dentistry - which contains the longest account of these things yet published - has its own peculiarities that differ from this. Also the mottled teeth have their own peculiarities that differ from every other. Now one tooth that has mottled enamel may also have atrophy, or various other marks that belong to other classes. Among the teeth I have cut and examined, a very slight atrophy mark was shown in two. Now this atrophy mark doesn't belong to mottled teeth, but is simply coincident. Any one who has not given close study to these dystrophies, will be absolutely unable to pick out all of these vagaries or to make a clear diagnosis of any one of these conditions, and that puzzles me very much in any effort to write rules for a clear diagnosis. One may be an excellent histologist, and never have had his mind directed particularly in this channel. If one remembers that an article by Szigmondy at the World's Columbian Congress in Chicago in 1893, written in the German language and never translated into English, was practically the first attempt at a scientific explanation of any of these dystrophies; and that my Operative Dentistry published in 1908 was the next and only other considerable writing on this subject, it could not be expected that the dental profession have had opportunity for a wide knowledge of these things.

Dr. F.S. McK #5

May 7, 1915.

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P.S.

Dr. A. D. Black, my son, when I mentioned that I had received your paper, said he was anxious to see it. At that time he was too much engaged with the last work in getting out the new book, to think straight of anything, but when I told him I had received it and was writing you a letter, he asked to see it before I sent it, and it has been withheld several days on that account.