

May 29, 1939

Dr. Ward Coffman
713 Market Street
Zanesville, Ohio

Dear Doctor Coffman:-

I am very glad to have had a chance to see your Mr. McConnell whom I examined and from whom I obtained certain samples of blood and excreta for analysis. Before discussing the question of lead poisoning in his case, I should like to say that my impression from the history and from my examination is that Mr. McConnell has some definite source of irritation of the nerve trunks, chiefly in the lumbo-sacral region. The muscle spasm along both sides of the lumbar vertebrae, together with the pains which are described, is in itself quite adequate to give me this impression. As to what has occurred in the shoulder girdle to produce similar irritation there, I am quite unable to say since this condition is not much in evidence at present. I should think, therefore that we are dealing here either with a spinal arthritis or with some mechanical factor in the vertebrae column which is resulting in irritation.

As to the relationship of lead to this case, I should say in the first place that the lesions in no wise resemble the effects of lead intoxication, so far as my experience can be regarded as a criterion. The multiple neuritis of lead intoxication is almost always painless and is certainly always predominantly motor rather than sensory. The absence of motor disability in a condition that has persisted with sensory disturbance as long as in this case, would be quite enough to convince me that lead was not a factor. However, even if the case were somewhat more suggestive of lead absorption, I would still be in great doubt as to the significance of lead in the matter since this man's occupation is not and has never been, so far as I can find, associated with significant lead exposure. In this connection it may be of some interest to you to know that there has never been a reported or authenticated case of lead poisoning in a filling station employee or garage mechanic as a consequence of the handling of leaded gasoline. These occupations are simply not to be regarded as hazardous in the sense of involving potential lead exposure. The factor of inhalation is wholly inadequate to produce significant lead absorption and there is no measureable absorption of lead through the skin, as a consequence of contact with commercial leaded gasoline.

I do not quite know where the idea arose that such exposure is potentially dangerous with respect to lead, but all of the investigations which have been made on this problem have yielded entirely negative information. We, for example, have never been able to find a single filling station operator who has absorbed lead as a consequence of his employment in quantities greater than are found in perfectly normal healthy individuals who do not work in the lead trades. These occupations, therefore, are not lead exposures in the clinical sense of the word.

In line with the conclusions and statements made above, the study of Mr. McConnell's blood and excreta with reference to lead yielded the following information. The lead in the blood amounted to 0.035 mgs. per 100 grams of blood which is right at the mean result for normal individuals such as ourselves. The urine showed 0.025 mgs. of lead per liter as compared with the mean normal figure of 0.037. It is quite apparent that Mr. McConnell has had no recent occupational lead exposure and that he is entirely normal with respect to the lead content of his tissues and excreta.

I am disposed to believe that there is some factor of neurosis in Mr. McConnell's present picture. I would not attempt to determine how great a factor it is, but I am disposed to feel that some reassurance with respect to the safety of his part time occupation might be beneficial. In any case you can assure him that his work at the filling station will in no wise react disadvantageously on his health from the point of view of lead absorption.

I am not in the habit of taking cases in consultation for the sake of the fee involved since I do not have time for such work unless it is definitely concerned with the field of our present studies. Accordingly I charged Mr. McConnell only for the actual cost of making the lead determinations, and I shall not send him any further bill. I make mention of this only because I should want you to be quite clear as to my reasons for being interested in seeing such a case.

With kindest personal regards,

I am

Sincerely yours,

RAK:is

Robert A. Kehoe, M.D.