

December 15, 1947

Dr. Paul G. Morrissey, Jr.,
201 21st Avenue, N.,
Nashville, (5) Tenn.

Dear Dr. Morrissey:

My attention has been called by Dr. Sim and Dr. Woody to the case of Mr. [REDACTED], who according to your report of November 29, has a dermatitis following contact with gasoline, a "plumbism, acute." In connection with your report information is given to the effect that the urine of this man has been found to have more than 1 mg. of lead per liter. I assume that this is the probable basis of the diagnosis of lead poisoning, but I should be pleased if you would let me have all the information now available about this man's illness.

May I take this means, however, in advance of your further information to make a few comments concerning cases of this type. It is not surprising, of course, to find cases of acute contact dermatitis, in association with the handling of gasoline. We have investigated quite a number of such cases, and we are quite prepared to say that they owe their characteristics to the gasoline itself, and not to the lead content of the gasoline. I can give you evidence on this point, but it is probably not required at this stage of our discussion.

Individuals do not absorb significant quantities of lead out of gasoline as the result of any kind of contact with it. The lead compound is so diluted that its absorption through the skin is of theoretical magnitude only. After studying a large number of persons engaged in occupations involving contact with leaded gasoline, it is now quite certain that the original conclusions, as indicated above, arrived at from animal experimentation, apply in their entirety to the human being. Therefore, at the outset it is highly improbable that a case of acute lead poisoning would result from skin contact with leaded gasoline.

The quantities of lead reputed to be found in this man's urine are quite beyond the range of possibility, barring the use of one specific type of medication. Quantities of lead of this order of magnitude do not appear in the urine of persons poisoned with lead, except under the most extreme and unusual conditions, and no such values have been obtained in connection with tetraethyl lead poisoning, except in the acute full-blown variety that has ended fatally and promptly. Such cases have been seen only as the result of very serious exposure to concentrated tetraethyl lead. Results of this type, as reported by you, convict themselves, without further evidence, of inaccuracy. What happened here, unquestionable, was that the sample of urine was

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contaminated with lead, either in its collection or during its analysis.

I should like very much if you would let me have the available information on this man. I should also be very glad to have samples of urine and blood collected for analysis, and if you are agreeable to this procedure, please let me know, and I shall send you the necessary containers and instructions for the collection of the samples. The results will be reported to you, and if they should show that this man has absorbed significant quantities of lead, we shall wish to investigate his case thoroughly in order to establish the source of his lead exposure.

I should be pleased if you were to let us in on this promptly so as to minimize the time interval between this man's exposure and our further collection of materials for analysis. By so doing we can probably establish the facts in such a way as to forestall litigation. If this man has a justifiable claim, we should be happy to make every effort to substantiate it in his behalf.

Very truly yours,

Robert A. Kehoe, M. D.

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