

April 24, 1942.

Dr. Jack B. Brams,
306 E. 12th Street,
Kansas City, Missouri.

Dear Dr. Brams:

I have your letter of April 22, concerning which I shall give you my best advice.

1. Concerning the analyses made one year after the patient left the brass foundry, I think it is fair to say that these results were obviously in error. The figure of 0.545 mgs. of lead per liter of urine might have been valid, if it had been obtained immediately after the cessation of exposure or during its occurrence. Even so, it is an unusually high figure. It is quite an impossible result twelve months after the discontinuance of exposure, and must have been obtained by some incorrect method either in handling the sample or in carrying out the analysis. On the basis of this opinion, it is apparent that you have no analytical data which justify any conclusion concerning the severity of this man's exposure. Therefore, this severity would have to be interpreted on the basis of definite and specific knowledge of the conditions in the plant involved. From what you have told me about the metal handled in the plant, I have a very definite question in my mind concerning the severity of the exposure. It is possible, of course, to have significant lead exposure when molten metals containing only 5% of lead are handled. On the other hand, it would be a bit unusual, and, therefore, I should want to know much more than is indicated in your letter concerning this exposure before accepting it as valid.

2. If it has now been two years since the discontinuance of this exposure, very little useful information can be obtained by any of the analyses mentioned in your letter. It is to be presumed on reliable evidence that the concentration of lead in the blood and urine of this man will be within approximately normal limits. It is quite certain that the microscopic blood changes will have disappeared and that examination for stippling or the basophilic aggregation test will show nothing which relates to this man's original lead exposure.

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Dr. Jack B. Brams - (2) - April 24, 1942.

3. This leaves one in the position of having to make a diagnosis from the history of the case. The diagnosis of lead encephalopathy is difficult to make under these circumstances, and I think, can be made only through the exclusion of other types of cerebral disease, plus definite evidence of lead exposure of serious proportions. Lead encephalopathy does not occur under conditions of slight to moderate lead exposure, but is always an expression of heavy lead exposure.

4. Coming now to the specific answer to your request, if you still wish it, I will send you tubes and a needle for the collection of blood samples and a container for the collection of a spot sample of urine. It will not be necessary to have a 24-hour urine sample, and it will be quite unnecessary to determine the partition of lead between the erythrocytes and the plasma. The analysis of fecal samples is never of value except under conditions of continued exposure, and, therefore, such samples are not required. As I indicated above, it is predictable that all of the results will be essentially normal. Nevertheless, if you want them, wire me, and I shall send containers at once, with suitable instructions.

For our records and information, I should like you to send me a complete clinical resume of this case, since we are concerned primarily with the collection of information rather than with clinical diagnostic procedures. I shall be glad to give you my opinion on the case, if you will send me the necessary information.

Cordially yours,

Robert A. Kehoe, M. D.

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P. S. Our charges will cover the actual cost of the analyses, which will approximate \$5.00 per sample analyzed. No charge is made, except on the basis of the patient's ability to pay.

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