

December 29, 1950

Dr. Leonard Apt,
The Children's Medical Center,
300 Longwood Avenue,
Boston 15, Massachusetts.

Dear Doctor Apt:

I should be very much pleased indeed if I could resolve the problems presented in your letter of December 9.

Unfortunately, both from your point of view and our own, we are not too well informed on the anemia which not infrequently accompanies lead intoxication. Therefore, I shall make only a few comments on the subject, primarily as it obtains in the case of adults. We have had a hand in the diagnostic problem in relation to children, but our own actual clinical studies have pertained, in the main, to adults. In the case of the adults anemia is not always an important part of the problem. My impression, which is not to be trusted too far, is that anemia in the adult, is an expression of a long continued exposure to abnormal quantities of lead. Where the exposure is relatively brief, the individual develops an episode of lead intoxication with very little in the way of anemia. There are evidences of irritation of the bone marrow with hypoplasia, as evidenced by reticulocytosis and stippling, but the anemia, if it develops, comes later in the disease.

Various people view the disease as a microcytic, hypochromic anemia. I am by no means satisfied as to the mechanisms involved, and consequently I prefer not to comment on the mechanism, but only on the description of the picture.

At present, we are intrigued by the problem of porphyrinuria, and its relation to the hematologic picture. We are undertaking to study this systematically, in connection with a number of conditions, including lead poisoning, and I trust that within a reasonable period of time, we shall have some sensible notion as to where it fits into the picture, and what it means in relation to the mechanism of the blood disorder that characterizes lead poisoning.

You will be surprised, perhaps, that I am quite uncertain about these problems, and have very little to say, that might be valued as useful or in any way authoritative. The fact of the matter is that I have been much more concerned with the lead metabolism and with the means of defining severity of exposure, than in the precise mechanisms that are represented. Our problem has been to

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establish, in a very well defined manner, the difference between safe and dangerous conditions in industry. I believe we have fairly well succeeded in doing this, and at the same time establishing diagnostic criteria, which are well defined. I trust that we shall be able to turn our attention more specifically to some of the mechanisms, in the future, and thus to learn more of the nature of the disease process. I am afraid I have given you very little help, but I should be happy to discuss this matter with you at a later time.

Cordially yours,

Robert A. Kehoe, M. D.

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Dictated but not read.