

April 25, 1935

Dr. R. B. H. Gradwohl
Gradwohl Laboratories
3514 Lucas Avenue
St. Louis, Missouri

Dear Dr. Gradwohl:

At long last I have come to the point of replying to your questions with regard to my opinion on methods of estimating the clinical significance of basophilic stippling of the erythrocytes. Perhaps I can best answer your question by quoting from an article which I recently prepared for the Cincinnati Academy of Medicine, and then by augmenting my remarks with a little introductory statement of my point of view about methods. I do not believe that any method is quite satisfactory which does not give a reasonably accurate quantitative statement of the number of stippled cells. My personal experience does not lead me to believe that the thick slide method permits of quantitative treatment. After giving some consideration to the various methods which have been described, I decided some years ago to begin the study of thin smears with uniform distribution of erythrocytes which would enable us to examine each erythrocyte with a high degree of definiteness. We selected a method of staining which gave very little difficulty from the point of view of uniformity, and we proceeded to systematically examine the blood of normal and abnormal individuals by counting the number of stippled cells in fifty fields, the average of which came very close to 250 cells. We are thus able to set down our results in figures which refer to 12,500 erythrocytes which enables us with only a small error to express them subsequently in terms of a million erythrocytes, which I believe is the most commonly accepted means of expression. I do not believe that it is only so much a question of ease of seeing stippled cells as it is a question of reasonable accuracy in the estimation of their number. From our findings alone which have been corroborated by other investigation, I think it is quite safe to say that the mere presence of stippled cells has no diagnostic significance. Consequently I like to know as accurately as possible for clinical purposes the approximate order of the number of stippled cells which occur.

I have followed a considerable number of men in one industry for a number of years, and we have made random observations on a number of others from time

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to time. We are now in the process of studying these data and I hope shortly we shall be able to publish the entire study. We have obtained a variety of analytical data on the magnitude of the exposure and the extent of the lead absorption on the men involved, and I think, therefore, we have somewhat more exact bases for the interpretation of our findings than are generally available. We have deliberately avoided publishing anything on the subject because of the somewhat controversial nature of the subject in current literature. We have now reached a point where certain conclusions have been amply justified and for that reason we are ready to make at least a conservative statement as to the meaning of what we have found.

The appended carbon copy of the as yet unpublished article of which I spoke above, will convey my present point of view adequately I hope. It occurs to me on second thought that you might be interested in what I have to say about the whole matter of diagnostic methods, and I am sending the entire carbon in spite of the fact that it lacks references and is not quite in the proper state for publication.

Cordially yours,

RAK"1s

Robert A. Kehoe, M.D.