

W. K. Kitzmiller

MEMORANDUM WITH RECOMMENDATIONS

Concerning Mr. [REDACTED] following review of the record of the Medical Department of the Chambers Works in his case, and the analytical data on his absorption and excretion of lead, and a further review of the reports of further medical examinations made recently by Dr. K. V. Kitzmiller and Dr. W. D. Ross of the staff of the Kettering Laboratory

Foreword

In view of the writer's former familiarity with the hygienic and medical regimen of the Chambers Works in relation to the tetraethyl lead area, which might have been productive of some preconceptions, the medical services of Dr. Kitzmiller were solicited for the purpose of conducting a complete examination of Mr. [REDACTED] - history, physical examination, elicitation and interpretation of laboratory findings - and for obtaining such consultations with specialists as he might require, these entire procedures to be carried out without the benefit or handicap that might derive from any source of information other than that provided by the patient. The reports of these physicians, provided under these circumstances, are attached.

The writer reviewed the medical records forwarded by Dr. Evans from the Chambers Works, after interviewing Mr. [REDACTED] and acquainting him with the procedure decided upon, went into the recorded information on occupational exposure to lead, studied all of the analytical results as to lead in Mr. [REDACTED] blood and urine, examined the medical reports of Doctors Kitzmiller and Ross, and hereby summarizes his opinions and recommendations.

Summary of the Salient Facts

There can be little real doubt that Mr. Agresta was subjected to an highly significant exposure to tetraethyl lead in the course of his work. Omitting any reference to the period prior to May 22 or thereabouts in the year 1951, and without regard to whether the incident described by Mr. [REDACTED], as having occurred on that date, was exactly as he described it, the analytical data demonstrate that tetraethyl lead, rather than inorganic lead, was the material involved at the time of onset of his illness. The excessively high levels of lead concentration in the urine so indicate, while the relatively low levels of concentration in the blood, and the prompt decrease in these within a few days to substantially normal levels, provide adequate confirmation of this conclusion. The remarkable fact here is that he did not develop more serious symptoms of lead intoxication at that time, and for this no explanation suggests itself. We have remarked, previously, that analytical data of this type demonstrate the extent of the absorption, and point to the degree of hazard, but they do not signify illness nor its severity except in a very general manner.

Mr. [REDACTED] behavior clinically and with reference to his urinary excretion of lead from May 22 onward is nothing short of phenomenal. The writer makes no pretense of being able to interpret it completely. Some question arises concerning the accuracy of the results obtained from time to time by the analysis of samples of blood. On one occasion only (6/29/51), the

concentration of lead found in the blood was reported to be high (0.081 mg. per 100 grams). On all other occasions (unfortunately no blood samples were analysed between the dates 7/26/51 and 2/11/52, or from the latter date on until 4/18/55) no significant elevation in the blood lead was encountered. After careful examination of the analytical data, it is concluded that the high urinary excretion of lead observed up to some time in October of 1951, was the result mainly of excessive absorption of tetraethyl lead in May of that year. There is nothing in the pattern of the excretion during this period - May through most of October 1951 - to suggest that anything unusual was occurring, except that the initial excretory response to the exposure of May 22 was remarkably great. Shortly after that, however, the excretory evidence of some new source of exposure appeared in the analytical data in an entirely unmistakable manner. Without discussing the pattern of the urinary excretion in detail, which would not be justified, the gross pattern demonstrates beyond any reasonable doubt the existence of a significantly abnormal but somewhat irregular source of lead absorption throughout most of the year 1952, 1953 and 1954 and during part of 1955. Just what this exposure was, and where and under what conditions it occurred, is not evident. (The details of Mr. [REDACTED] employment during this period should be gone over minutely, if possible, in search of sources of exposure derived from his work. It is difficult to make out the precise nature of his work from the medical records.) A significant source may well have existed in Mr. [REDACTED] water supply, as was suspected and at least partially confirmed, but the evidence is not such as to be entirely

acceptable as an explanation of the situation. It is entirely certain, however, that the continued high urinary excretion of lead, at the levels found, during the long period from May of 1951 to sometime in 1955, was not the result of a period of intense exposure to tetraethyl lead in 1951. Nor was it the consequence of an occupational absorption of lead prior to 1951. There can be no doubt that an highly significant source of exposure and absorption of lead persisted during most of the period from sometime late in 1951 throughout the greater part of the succeeding three years. This was sufficient not only to prevent the progressive decrease in the excretory rate, which, otherwise, would have reached a substantially normal level of lead excretion within 18 to 24 months at the outside, but even to bring about periodic and significant increases in the excretory rate to unusually high levels. This was no minor or hypothetical exposure; it was quantitatively significant and real. It is now unlikely that this mysterious source of irregular but generally persistent exposure can ever be discovered. It is possible that it might have evaded systematic investigation at the time it was in existence. The fact remains, however, that Mr. [REDACTED] physicians, particularly Dr. Evans, need not feel undue chagrin over their inability to account for what was going on. The situation was essentially without precedent, and indeed the coincident occurrence of an unknown type of exposure is an unusual phenomenon. We have seen such a situation only once (certainly) or perhaps twice in thirty years of experience. Point is made of this because Mr. Agresta believes that he has been ill-advised medically and to some degree misled. He should be informed, through the medium of

this memorandum, as he could not be when he was here, prior to the careful study of the analytical data, that no one could have been expected to interpret the situation by any other means than that of a detailed investigation of his intake and output of lead over a fairly prolonged period. The latter, in retrospect, might have been done to advantage, but one can well believe that it was not easy to decide that such an investigation was necessary or justified.

General Conclusions

It is believed, at this time, that Mr. [REDACTED] has recovered from the toxic effects of his initial episode of tetraethyl lead intoxication and from the prolonged exposure of his tissues to a high level of lead concentration. He is now free, in every practical sense, of the lead absorbed in 1951, and of the very considerable quantity absorbed during the subsequent years. He should not develop any further sequelae of this exposure, and such sub-clinical somatic injury as he may now have, as the residual effects of his former exposure, may be expected to disappear. In short, he now has no demonstrable physical disability of toxic origin. It is believed that he has certain neurotic residues of this experience. Under the circumstances, some of which were bizarre, with which this situation has been surrounded, the origin of the illness and disability which Mr. [REDACTED] has sustained can best be regarded as occupational. It might have been possible at one time to separate the non-occupational from the occupational factors, although that is by no means certain. At present, however, this would seem to be impossible. The new problem now is one of rehabilitation.

Recommendations

1. It is not within the province of this consultant to make specific recommendations as to any claim which Mr. [REDACTED] may have or make for compensation or for reimbursement of expense or loss. He has not exhibited any hostility based on financial considerations, and these matters were not inquired into except in a superficial manner. Nevertheless, it is believed that any important issue of this type which may exist should be faced squarely, in order to dispose of it summarily as an obstacle to the achievement of a sound solution of his problem. In our view, the handling of such issues from the Company viewpoint should be based on the acceptance, in principle, of the occupational origin of the problem.

2. Every attempt should be made to return Mr. [REDACTED] to productive work within the scope of his experience and competence. The cultivation of completely normal working relationship, and the tactful but effective elimination of the unusual features of his employment situation, will probably do more for him than will any other measures.

3. It is believed that Mr. [REDACTED] will need help in achieving a normal, healthy attitude toward himself and his personal and employment problems. This can best be accomplished by the intervention of a psychiatrist, and it is believed that he should be seen early and from time to time as circumstances require by Dr. Gordon.

4. The restoration of Mr. [REDACTED] confidence in the judgment and motivation of the medical personnel of the Chambers Works would be highly advantageous. It seems that this should

be feasible, and it is suggested that some collaboration between Dr. Evans and Dr. Gordon to this end may be beneficial. The medical group in the plant will certainly be concerned with day to day and periodic consultation with Mr. [REDACTED] and can help him in ways that will not disturb the other personal and organizational relationships of his day's work. Their efforts should be in harmony with those of Dr. Gordon.

Signed: Robert A. Kenoe

Robert A. Kenoe, M. D.

October 29, 1955

KE 0005150