September 13, 1939

Dr. Hugh E. Alexander
613-618 Goodhue Building
Beaumont, Texas

Dear Doctor Alexander:

The question raised in your letter of August 31st is one which would be rather difficult to answer without somewhat detailed knowledge of the nature and the duration of the lead exposure of the patient. There is no question that welding operations on heavily painted metal constitute a rather serious exposure to lead fumes. The severity of the exposure, however, depends upon a number of factors, of which the most important are the ventilation of the area in which the work is done, and the length of time during which exposure occurred. Acute poisoning can occur from the inhalation of fumes created by welding, and even fatal cases have been seen in a number of instances. Indeed this may be regarded as one of the most dangerous of the occupational lead hazards. Serious and fatal cases, however, have usually been the result of fairly prolonged and continued exposure,as in ship cutting and bridge building.

As you know the differential diagnosis of cramping abdominal pain, diarrhoea and alimentary hemorrhage is not always easy. This combination of symptoms can occur in a number of conditions and before attributing it to lead intoxication, I should want to have somewhat definite evidence of the nature of the organic lesion which produced the hemorrhage. I should also want to know the general character and the duration of the lead exposure, and I should want some evidence of the magnitude of the lead absorption in terms of blood lead concentrations and urinary lead concentrations. As to the relationship between lead poisoning and coronary occlusion, I should be very skeptical. In view of the very large number of vascular lesions which are attributed to the effects of lead, I would hesitate to say that coronary occlusion could not be induced by an episode of lead poisoning. However I consider any causal association as highly improbable. If there are any further matters in connection with this case in which I can be of any assistance to you, I should be very glad. I think I should say, however, that the diagnosis of lead intoxication is often made much too hastily. That, I think,

is one reason why the literature is so confusing. Almost every lesions which can be imagined has been attributed by someone to the effects of lead, and often for the reason that this provided a prompt and easy answer to an otherwise difficult problem in differential diagnosis.

Cordially yours,

RAK:ls

Robert A. Kehoe, M.D.