April 3, 1933

OHIO DEPARTMENT OF HEALTH

Bureau of Occupational Diseases
Columbus, Ohio

COPY Recd 4-25-33

Supplementary Evidence in the Diagnosis of Lead Poisoning

(Items are arranged for checking or comment on the given case)

Patient's Name [redacted] Address 3771 W. 130th St., Cleveland, O.

Physician's Name Dr. Edward F. Kotershall, Address 2841 W. 25th St., "

Objective, i.e., the physician's findings

1. Pallor (especially circumoral) present
2. Blue line* in gum(s) not present
3. Stippling* (basophilia of red cells) present. has cleared up
4. Reticulocytosis* present Polychromatophilia not present
5. Red cell count(s) 3,560,000 / 4,200,000 White cell count(s) 10,000 / 10,000 Mononucleosis present
6. Hemoglobin percentage 80% / 82% How determined Talvist
7. Evidence of recent blood changes of retrograde character was present is clearing up.
8. Blood pressure findings 90/54 — 96/56 — 100/60
9. Condition of teeth, gums, mouth All infected and dead teeth have been removed some pyorrhea present and has been treated
10. Condition of hand gripping power diminished
11. Condition of wrist extensors (any actual wrist drop) Drop present on Rt. side
12. Tremor slight Incoordination present Ataxia present
13. Patellar reflexes Diminished
14. Ocular palsies present on Rt.
15. Malnutrition or emaciation slight
16. Acne or dermatitis present on forehead and back
17. Evidence of nephritis slight of albumin
18. Gouty signs none
19. Mental disturbance slight decrease in mental alertness
20. Other objective sig: paralysis of tongue and Rt. side of face clearing up.

*"Blue line in gum(s)", "stippling" and "reticulocytosis" occur in Lead Absorption, but, with or without those, it requires significant abnormalities in various ones of the other Objective and Subjective findings listed to sustain a diagnosis of

N8249

Subjective, i.e., the patient's complaints

1. Morning anorexia present — Metallic (or sweet) taste present
2. Nausea or vomiting not present — Dyspepsia present
3. Acute attacks of abdominal colic not present except at onset
4. Obstinate constipation slight — Diarrhea at onset not present
5. Headache present — Insomnia present
6. Weakness (hand grips; use of wrists, legs, feet, etc present especially on right side, could not walk well at onset.
7. General weakness present.
8. Rheumatic pains present in Rt. wrist and knee
9. Disturbed vision present with optic atrophy — Syncopal attacks not present
10. Weight: Normal 150 — At present 140
11. Other symptoms

12. Any further comment:

Physician's Signature Edwin F. Kotershall, M.D.

Date Aug 24, 1933

The diagnosis of Lead Poisoning involves evidence of (1) exposure to lead or its compounds; (2) objective signs of blood changes, of nervous involvements and usually nutritional disturbances; and (3) the presence of a number of the subjective phenomena above listed.

Stippling (also reticulocytosis and polychromatophilia) indicate that lead absorption is going on at the time. The number of stippled cells found increases as absorption progresses and is a rough measure of the amount of exposure. Hence workers showing stippling without other evidences should have blood examinations made frequently. Stippling with other evidences (see above list of objective and subjective findings) constitutes acute lead poisoning, but acute lead poisoning occasionally exists without stippling (here reticulocytosis is invariably prominent and the red cells should always be examined for this condition). When the condition becomes chronic, stippling usually diminishes, but is rarely absent as long as exposure continues or other clinical signs prevail, while anemia is invariably present, usually also with polychromatophilia.

Inasmuch as the accuracy of analytical findings of lead in the urine and feces is a matter of great doubt, the value of tests for same in establishing diagnosis is questionable.