

basophilic stippling (stippled cell count, 0.5 per cent). The urine had a specific gravity of 1.028, albumin (1+), no sugar, and 20 to 25 white blood cells per high power field. Chemical examination of the blood showed serum bilirubin, 0.2 mg. per 100 cc.; blood nonprotein nitrogen, 31 mg. per 11 cc.; serum chlorides, 100 mEq./L. Phenolsulfonphthalein excretion (6 mg. given intravenously) was 70 per cent in two hours. Renal lead excretion during the first 24 hours in the hospital was 0.48 mg. per liter of urine.⁵

Course in the Hospital.—During the first two hospital days the patient was given fluids intravenously to supplement his oral intake and was given meperidine hydrochloride U. S. P. (demerol® hydrochloride) for analgesia. He required 50 mg. of meperidine hydrochloride every three or four hours for relief of pain during this time. Low calcium food and fluids were given as tolerated. He was also given phenobarbital sodium U. S. P. and atropine sulfate subcutaneously. On the second hospital day, sodium citrate therapy was instituted, with a dosage of 1.0 Gm. four times daily. He was maintained on a low calcium diet. At this time there was a sharp decrease in his requirement of analgesic medication. His hospitalization from this time was uneventful. He was given sodium citrate, 1.0 Gm. four times daily, for one week. During

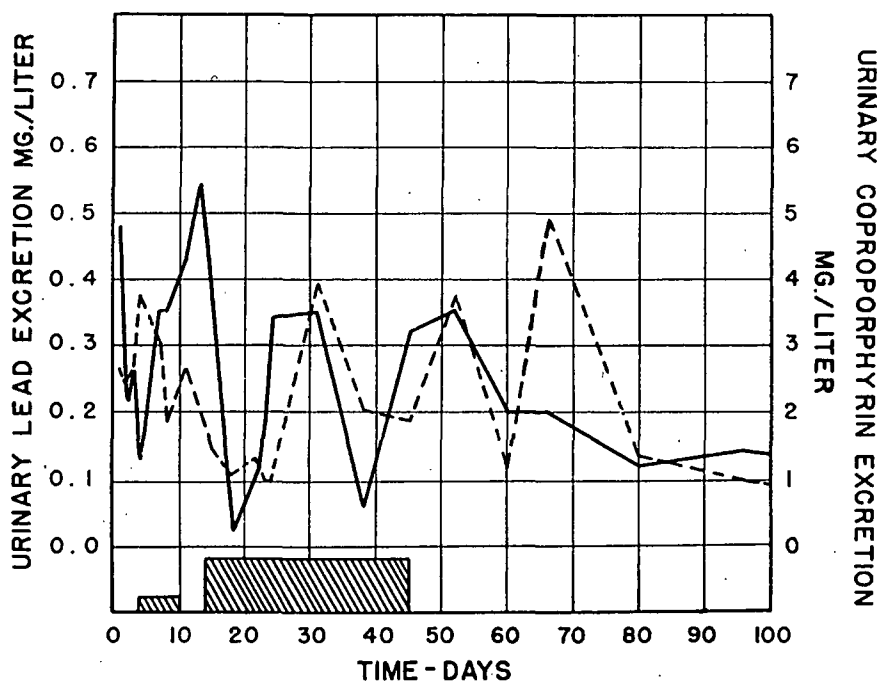


Chart 1 (case 1, patient J. S.).—The solid line represents urinary lead; the broken line, urinary coproporphyrin. The striped blocks represent oral sodium citrate therapy with a low calcium diet and are explained in the text.

this time there was a sharp fall in urinary lead. In a four day period, during which sodium citrate was omitted, the lead excretion rose to a peak of 0.54 mg. per liter of urine. Sodium citrate therapy was reinstituted at 4.0 Gm. four times daily, and again the lead excretion dropped off precipitously. As therapy was continued, the lead excretion gradually rose to 0.34 mg. per liter of urine. From that time the lead excretion except for one instance remained high for a period of approximately 30 days and then fell gradually over a period of about 10 weeks until, on Feb. 13, 1950, the lead excretion was 0.11 mg. per liter of urine. The citrate was given in the higher dosage for a total of 31 days.

The patient was given no antianemic therapy. His hemoglobin remained low, but as the lead excretion began to fall, the hemoglobin began to approach normal levels.

5. Since the urine specimens collected were spot samples, all values were adjusted to a mean specific gravity of 1.024 (Levine, L., and Fahy, J. P.: Evaluation of Urinary Lead Determinations: I. The Significance of the Specific Gravity, J. Indust. Hyg. & Toxicol. **27**:217-223, 1945).