

0.46 mg.⁵ Serum bilirubin totaled 2.2 mg. per 100 cc. An osmotic fragility test showed hemolysis to begin at 0.48 per cent sodium chloride and to be complete at 0.32 per cent. This is interpreted as normal.

Roentgen examination of the chest showed no evidence of an active pulmonary change.

The urinary lead and urinary coproporphyrin levels and their relation to the therapeutic program are shown graphically in chart 2.

Course in the Hospital.—Soon after admission the patient was in acute distress. He was given meperidine hydrochloride U. S. P., 100 mg. subcutaneously, as needed for pain. He was also given atropine sulfate, 0.4 mg. subcutaneously every six hours, and his fluid intake was supplemented with intravenous dextrose and saline solution. Moderate amounts of barbiturates were given for sedation. Sodium citrate was started in a dosage of 1.0 Gm. four times daily on the second hospital day. He was given a low calcium diet as tolerated. The patient remained

TABLE 2.—Laboratory Data—Case 3, Patient S. O.

		Chemistry	
7/2/49	Cephalin-cholesterol flocculation test.....	24 hr. neg.	48 hr. neg.
	Prothrombin time.....	70%	
	Van den Bergh test for bilirubin in serum.....	0.4/1.5 mg. per 100 cc.	
	Nonprotein nitrogen (blood).....	28 mg. per 100 cc.	
	Calcium (serum)	9.2 mg. per 100 cc.	
	Phosphorus (serum)	2.8 mg. per 100 cc., checked	
	Phosphatase (serum or plasma).....	2.6 Bodansky units	
7/8/49	Sodium (serum).....	134.2 mEq./L.	
	Chlorides (as chloride ion, plasma or serum).....	98 mEq./L.	
	Carbon dioxide content (venous).....	29.3 mEq./L.	
7/5/49	Urobilinogen test	14.6 Ehrlich units	
		Urine	
7/1/49	Color: Clear yellow Reaction: 6.5 Specific gravity: 1.010 Albumin: 0		
	Sugar: 0 Bile: 0		
		Blood	
7/1/49	RBC: 3.69 million WBC: 8,250 Hgb: 8.5 Gm. Polymorphonuclears: 69%		
	Large lymphocytes, small lymphocytes: 22% Monocytes: 6% Basophils: 2%		
	Platelets: adequate		
	Stained specimen: 2 nucleated red cells seen per 100 WBCs; moderate polychromatophilla; no basophilic stippling seen; reticulocytes, 5.6%		
	Hematocrit: 28%	Mean corpuscular hgb. content = 23 μ g	
	Supernatant serum: icteric ++	Mean corpuscular hgb. concentration = 30.4%	
	Mean corpuscular volume = 75.9 c. μ	Color index: 0.76	
7/6/49	Corpuscle count: 10,000 Hgb: 9 Gm. Basophilic stippling		
7/25/49	Hgb.: 10 Gm.		

uncomfortable with abdominal pain and vomiting and required meperidine hydrochloride for pain even on the fifth hospital day. He was free of symptoms on the sixth hospital day and remained so for the rest of the period of observation.

During the period of observation he was given a low calcium diet for seven days, then a regular diet for seven days, then a low calcium diet for 19 days. After he had received sodium citrate, 4.0 Gm. per day for seven days, therapy was omitted for seven days. Then he was given sodium bicarbonate, 4.0 Gm. four times daily, for nine days. It is difficult to relate the changes in his lead excretion to the therapeutic program. Within two months the lead excretion came to within normal limits, and on Feb. 18, 1950 the urinary lead was 0.07 mg. per liter. Also, during this time the hemoglobin rose to 13 Gm.

CASE 3.—S. O. was a 25 year old white man who during the four months prior to admission worked as a grinder in an automobile assembly plant where lead solder is used to finish seams. Because of an increase in production, the patient was working with a rotary disk of greatly increased speed. This resulted in nine consecutive hours of steady inhalation of lead dust. Prior to this man's illness no protective equipment had been supplied, but subsequently the work was enclosed in a booth and outside air provided to the men, who were required to wear respirators constantly.