

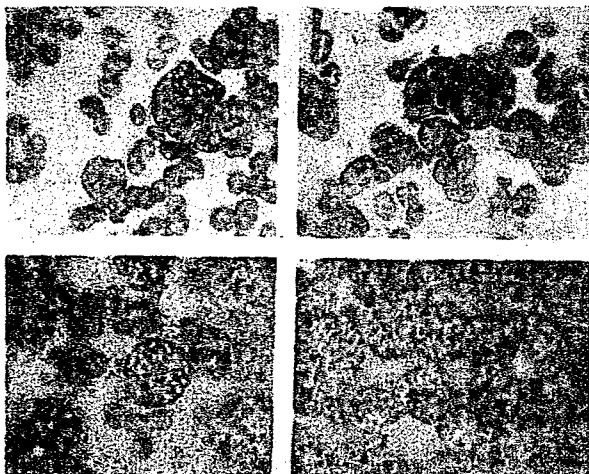


Fig. 1.—Vacuolization of primitive red cell precursors of marrow in chloramphenicol toxicity. *a*, Case 1; *b*, Case 7; *c*, Case 9; *d*, Case 13.

count was 27,000, and white blood cell count was 5,200. Bone marrow was normally cellular, but red blood cell elements were reduced and early forms contained vacuoles (Fig. 1*a*). White blood cells were normal on the peripheral blood smear. The patient had also received meprobamate, choline theophyllinate, tetracycline, and bis-hydroxycoumarin, but all had been discontinued 2 or 3 weeks prior to the discovery of marrow toxicity. He was given 600 ml. of sedimented red blood cells, and chloramphenicol was discontinued, but he died of heart disease prior to complete marrow recovery. At postmortem examination, 5 days after administration of the last drug, there was still a definite reduction of erythroid cells in the marrow. Other marrow elements were normal. There was minimal early liver cirrhosis.

*Case 2.*—A 50-year-old Negro female was admitted because of pneumonitis. She received 2 gm. (42 mg/kg.) of chloramphenicol daily for 17 days and again for 27 days after a 6-day rest. At the end of the second course, the hematocrit was 23 vol.%, reticulocyte count 0.0% and white blood cell count 10,375. Platelets were adequate on the peripheral blood smear. The bone marrow was cellular, but there was a reduction in the red blood cell elements. The rubriblasts and prorubricytes were vacuolated. The drug was stopped and 600 ml. of sedimented red cells were administered. The hematocrit reading rose to 31 vol.%, where it stabilized. Twelve days later, the reticulocyte count was 2.3%. Although she had received promethazine hydrochloride in addition to streptomycin during the first course of chloramphenicol, no medicaments except milk of magnesia and cascara were given during the second course, when marrow suppression became evident. One month later, after apparently complete recovery from marrow hypoplasia, she died of her pulmonary infection. At postmortem examination, the liver was found to contain minimal fatty infiltration. The bone marrow was hyperplastic in all hematopoietic elements.

*Case 3.*—A 55-year-old Negro male was admitted because of coma and convulsions. He had a short, acute psychosis, compatible with delirium tremens. He was given 2 gm. (37 mg/kg.) of chloramphenicol prophylactically for 22 days. At the end of this time he had hematemesis. The hematocrit level had fallen from 45 to 26 vol. % and the platelet count was 30,000. Reticulocytes were 0.1% and the white blood cell count, 3,600. The marrow was hypocellular and the primitive rubriblasts contained vacuoles. He was given 2,000 ml. of whole blood and chloramphenicol therapy was discontinued. Four days later the hematocrit reading was 35 vol.%, reticulocytes 1.8%, white blood cells, 7,375, and platelets were 47,000. After 2 weeks the hematocrit was 44 vol.%, reticulocytes 1.5%, white