for 5 days intramuscularly and then 2 gm. (60 mg/kg.) daily for 6 more days. The hematocrit reading had been 36 vol.% shortly after admission but was found to be 14.5 vol.% after the course of chloramphenicol. The platelet count was 22,000. Reticulocytes were not determined then, but 6 days later they were 0.8%. Bone marrow aspiration was cellular, but there was almost complete lack of red blood cell elements. The number of megakaryocytes was reduced. Granulocytes appeared normal in the peripheral blood smear and in the bone marrow. Primitive rubriblasts contained numerous vacuoles. She was given 600 ml. of sedimented red blood cells and 500 ml. of whole blood. Nine days after the chloramphenicol was discontinued, reticulocytes were 4.1%. Three weeks after cessation of therapy, the marrow contained adequate red cell precursors but maturation was atypical. Two weeks later it was frankly megaloblastic. After 6 days of treatment with approximately 1.25 mg. of folic acid daily (¼ of a 5 mg. tablet), the number of reticulocytes had risen from 0.6% to 6.6%. The hematocrit reading rose from 30 to 39 vol.% in 3 weeks. Later, a Schilling test was normal.

Case 7.—A 17-year-old Negro female with presumptive sickle cell anemia (complete genetic data are not available), was treated with chloramphenicol for osteomyelitis of the proximal tibia, receiving 1.5 gm. (29 mg/kg.) daily intramuscularly for one day, 2 gm. (38 mg/kg.) daily orally for one day and 3 gm. (58 mg/kg.) daily orally for 17 days. At the end of this time, the hematocrit reading had dropped from 31 to 16.5 vol.% and reticulocytes from 3.8% to 0.5%. The bone marrow aspirate contained decreased numbers of erythroid cells and a few of the primitive rubriblasts contained vacuoles (Fig. 1*b*). Recovery from the aplastic crisis was prompt after cessation of chloramphenicol therapy. Whereas aplastic crises unrelated to this drug are seen in patients with sickle cell anemia, both the time relationship and the presence of abnormal primitive red blood cells strongly suggest that the drug was responsible.

Case 8.—A 3-year-old, 42 lb. (19.1 kg.) Negro female was admitted because of a fever of unknown origin. Eight days later she was given chloramphenicol, 0.8 gm. (42 mg/kg.) daily for 2 days, followed by 2 gm. (105 mg/kg.) daily for 13 days because of an initial but later untenable diagnosis of typhoid fever. The hematocrit reading fell from 32 to 25 vol.%. Five days after the drug was stopped, the reticulocytes were 0.0%. On the next day, the marrow contained increased erythroid activity and there were no vacuoles in the rubriblasts. Nineteen days after therapy was stopped, the hematocrit value had spontaneously risen to 36 vol.% and reticulocytes were 2.2%. Other than a few days of tetracycline soon after admission, she received no other drugs.

Case 9.—A 50-year-old Negro female was found to have apathetic thyrotoxicosis and was treated with methimazole. She also received 2 gm. (43 mg/kg.) daily of chloramphenicol for 11 days. The hematocrit reading fell from 34 to 27 vol.% during this therapy and the reticulocyte count from 4.8% to 1.0%. White cells and platelets were normal. The marrow aspirate contained some reduction in red cell precursors and the rubriblasts were vacuolated (Fig. 1*c*). Methimazole therapy was not discontinued. Four days after the last chloramphenicol, the marrow was slightly more cellular and there were more erythroid elements. No vacuoles were seen. The reticulocyte count had risen to 3.2%. Seven days later the hematocrit value had returned to the prechloramphenicol level of 34 vol.%.

Case 10.—A 25-year-old Negro male was admitted following a 2-week debilitating illness due to typhoid fever. The bone marrow was cellular; granulocytes were increased but red cell precursors were normal. The patient was treated with 3 gm. (44 mg/kg.) of chloramphenicol daily for 3 days followed by 4 gm. (60 mg/kg.) daily for 10 days, and then 2 gm. (29 mg/kg.) daily for two days. On the day following reduction in dosage from 4 to 2 gm. daily, the reticulocytes were 0.1% and the bone marrow contained reduced numbers of erythroid cells. The rubriblasts contained vacuoles. Three days after cessation of therapy, the reticulocytes were 0.2%. The next day they were 1.0%, and 6 days after administration of chloramphenicol was stopped they were 5.2%. The hematocrit