

The average blood level for 15 premature infants, 1 to 2 days old, given a single injection of microcrystalline chloramphenicol, 50 mg/kg intramuscularly, is shown in Figure 2. Adequate blood levels were attained within 7 hours in all but 2 infants. The peak was reached at the 23-hour sample, followed by a gradual fall. The half-life of the administered dose was 28 to 44 hours as compared to a half-life in adults of 15 to 24 hours. (10) Two premature infants 8 and 9 days old were given the same dose. The blood levels as shown in Figure 2 were lower than in the younger babies, and the fall in level was more rapid. The birth weights of the infants tested are grouped on the charts. There was no correlation between birth weights and blood levels.

Further studies were carried out on week-long dosage schedules. Premature infants, ages 1 to 4 days, were given microcrystalline chloramphenicol, 50 mg/kg intramuscularly, every 48 hours. Of 12 infants tested, 8 had adequate levels but with marked fluctuations. Only 1 of 4 prematures, ages 13 to 27 days, similarly tested, had adequate levels. Using a schedule of 25 mg/kg given once daily, all of 12 infants tested had adequate levels in the 1- to 6-day-old group, but only 2 of 8 in the 14- to 23-day-old group. Given 50 mg/kg once daily to premature infants 9 to 36 days old produced adequate levels in all 8 infants tested without toxic symptoms.

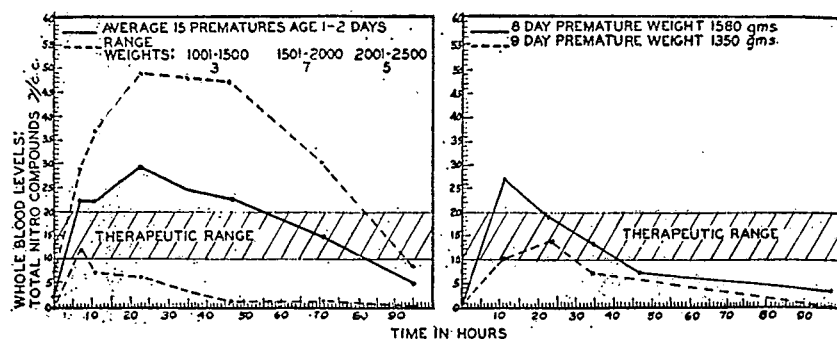


FIGURE 2.—Blood levels following a single dose of microcrystalline chloramphenicol 50 mg/kg I.M.

CHLORAMPHENICOL SODIUM SUCCINATE†

Chloramphenicol sodium succinate is a recently introduced ester of chloramphenicol which is highly water soluble and hence more readily absorbed than the micronized form. (11) Figure 3 shows the average blood level of nitro com-

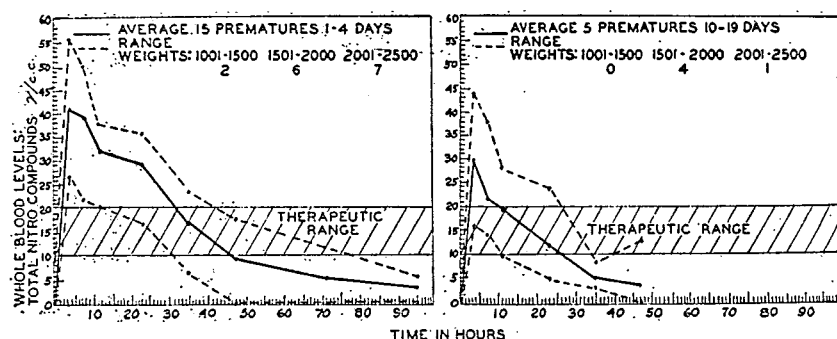


FIGURE 3.—Blood levels following a single dose of chloramphenicol sodium succinate 50 mg/kg I.M.

†Chloromycetin Succinate.