

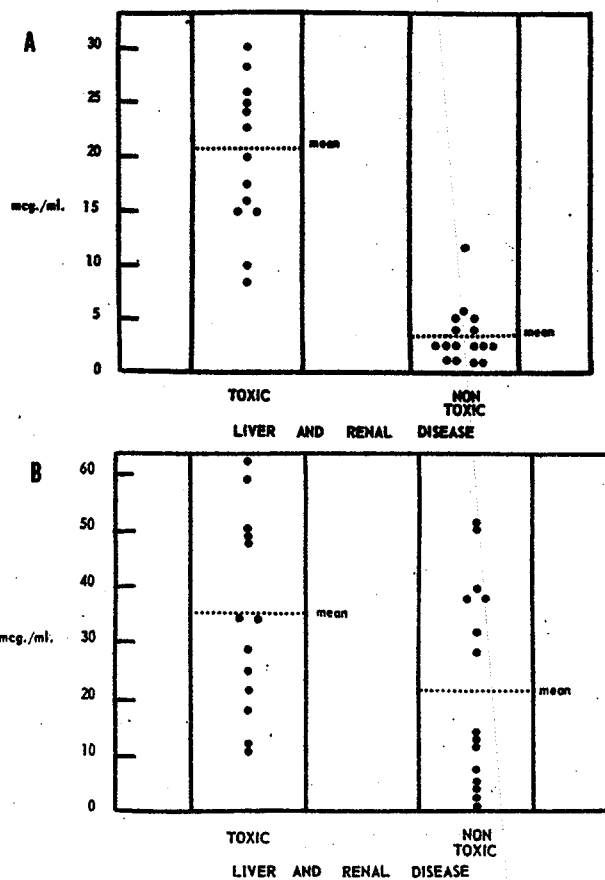


Fig 3.—A, Maximum serum levels of free chloramphenicol. Distribution of serum free chloramphenicol levels in liver and renal disease. Only one patient in the nontoxic group has a serum level of over 5 μ g/ml. B, Maximum serum levels of total nitro compounds. Lack of correlation between total nitro compounds and toxicity. The slightly higher mean value in the toxic group is due to elevated levels of free chloramphenicol.

TABLE 5.—SERUM LEVELS OF "FREE" CHLORAMPHENICOL

Patients	Range, serum level μ g/ml	Mean, μ /ml	SD
No liver or renal disease: Nontoxic.....	0-3.4	1.2	± 0.7
Renal and liver disease: Nontoxic.....	2.0-12.0	3.9	± 2.4
Renal disease: Toxic.....	15.0-25.0	20.3	± 4.8
Liver disease: Toxic.....	8.0-30.0	19.0	± 7.7

Between nontoxic and toxic groups $P < 0.005$.

The correlation between the rise in serum level of "free" chloramphenicol and the rise in serum iron in one patient with liver disease is shown in Fig. 4. Chloramphenicol in a daily dose of 2.0 gm was administered for 14 days and produced a continual rise in serum "free" chloramphenicol to 30.4 μ g/ml. Paralleling this increase in "free" chloramphenicol the serum iron rose from 38 μ g% to a high of 332 μ g%. During this period the hematocrit did not change appreciably and fell to significant levels only after the drug had been discontinued. Also after cessation of chloramphenicol administration, the serum iron promptly returned to pretreatment levels. The reticulocyte count, not shown, fell to a low of 0.2% on day 15 but rose to 7.0% six days after chloramphenicol was discontinued.