

Accumulation of Chlorophyll Pigments in Visceral Organs and their Elimination.*

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Reference has been made¹ to the accumulation of pigment in the spleen, bone marrow and liver after intravenous injection of chlorin-e-rhodin-g in rabbits. It seemed desirable to determine if the accumulated pigment is eliminated in the course of time and if other chlorophyll pigments are similarly deposited.

Five normal adult male rabbits were injected intravenously with sodium chlorin-e-rhodin-g for 34 days in daily doses of 145 mg in 14.5% solution. At the end of this period, when each rabbit had received 4.44 g of the pigment, 2 rabbits were killed. The other 3 were allowed to live 3 months longer, during which no pigment was injected. They were then killed and the amount of pigment in the tissues was compared with that in the other 2 animals.

In the 2 rabbits killed after 34 days of pigment injection the spleen and liver were very dark and the bone marrow was deep chocolate in color as in previous experiments. Microscopically golden-brown pigment was conspicuous in large phagocytic cells in the spleen and bone marrow, and was found in smaller amount in the liver as previously described. In the 3 rabbits treated identically with the pigment, but allowed to live 3 months with no pigment injection, the organs, including the bone marrow, were grossly much lighter when seen at necropsy. This suggested that the pigment had been eliminated to a considerable extent. However, microscopic examination showed that large amounts still persisted in the phagocytic cells of the 3 organs named. It was estimated from various fields in histological specimens that half to three-quarters of that present at the end of the month of treatment persisted in the spleen and bone marrow after 3 months without treatment. In the spleen the pigment was loosely arranged in very large phagocytic cells and at times appeared to lie free in tissue spaces. In the bone marrow the phagocytic cells containing pigment were sharply

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¹ Henderson, H. J., and Long, E. R., *Proc. Soc. Exp. Biol. and Med.*, 1941, **48**, 435.

defined and the pigment was present in the form of coarse dense granules.

The amount in the liver appeared to have decreased to a greater extent than in the spleen and bone marrow. Few Kupffer cells containing pigment were found, but many large phagocytic cells containing pigment were seen in the perivascular tissue, especially in the portal triads, a fact suggesting migration of pigmented cells in the lymph. Whether any of the pigment presumably originally present in the Kupffer cells had been eliminated in the bile could not be told by histological methods.

The pigment was not found in the kidneys, lungs, myocardium, adrenals, alimentary tract, generative organs or central nervous system, but was present in considerable amount in lymph nodes.

Blood counts on animals injected with large amounts of sodium salt of chlorin-e-rhodin-g did not show any alteration from the normal blood picture in serial examination during the course of administration of the pigment, although much pigment was found in the bone marrow of these animals at necropsy.

Summary. Chlorin-e-rhodin-g was very slowly eliminated from the tissue of rabbits after intravenous injection. The major portion of that deposited in the spleen and bone marrow after a month of administration was still present in phagocytic cells 3 months later. Somewhat greater elimination occurred from the liver. The deposit in the hemopoietic organs had no evident effect on their function.

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Effect of Stilbestrol on Lactogenic Content of Pituitary and Mammary Glands of Female Rats.*†

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Estrogenic treatment of male and female rats has been shown to cause an increase in the lactogenic content of the pituitary (Reece and Turner¹). This increase amounted to 45% after treatment with

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¹ Reece, R. P., and Turner, C. W., *Mo. Agr. Exp. Sta. Res. Bul.* 266, 1937, 64.