

responsible for the failure of some authors to obtain the cornea polysaccharide acid. By extraction with dilute salt solution, no hyaluronic acid was extracted from cattle skin. Finally, a sulfuric acid containing polysaccharide has been obtained from skin as a protein compound giving viscous solutions by Van Lier.⁹

Since the sclera is similar chemically and histologically to the substantia propria of the cornea, except for the absence of this polysaccharide, it becomes a problem to determine whether this polysaccharide is concerned with corneal transparency.

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Can Strophanthin Maintain Adrenalectomized Mice?*

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In a recent report by Zwemer and Lowenstein it was suggested that adrenalectomized cats can be maintained in good condition by the administration of strophanthin.¹ This substance was administered daily in the concentration of 15 μ g per kg of body weight.

We have attempted to extend these findings to the mouse. For these experiments 21-day-old mice were bilaterally adrenalectomized. A total of 140 operated animals were employed, 40 serving as uninjected controls, while the remaining 100 animals received various concentrations of strophanthin. The strophanthin was dissolved in olive oil so that the daily dose was contained in 0.1 cc of oil. Injections were made subcutaneously, beginning 24 hours after the operation and continued for 8 days.

Table I summarizes the results of the administration of strophanthin in daily concentrations of 0.02, 0.2, 2.0, 5.0, 10.0, 20.0, 50.0, and 100.0 μ g, respectively. Of 40 uninjected control animals, only 4 were alive on the 10th day after adrenalectomy. The average survival of the remaining 36 animals was 4.7 days. The administration of

⁹ Van Lier, E. H. B., *Z. Physiol. Chem.*, 1909, **61**, 177.

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¹ Zwemer, R. L., and Lowenstein, B. E., *Science*, 1940, **91**, 75.

TABLE I.
Survival of Adrenalectomized Mice Injected Subcutaneously with Strophanthin.

Amount per day, μg	No. of animals	No. of animals alive 10th day after adrenalectomy	Avg survival, days
0	40	4	4.7 (1-8)
0.02	15	1	3.6 (3-6)
0.2	15	1	3.8 (2-5)
2.0	15	1	4.3 (3-9)
5.0	14	1	4.2 (2-6)
10.0	14	1	4.7 (2-9)
20.0	13	0	4.5 (2-5)
50.0	7	0	2*
100.0	7	0	2*

* All the animals in these groups were dead on the 2nd day after adrenalectomy.

desoxycorticosterone acetate† in a concentration of 0.2 mg per day protected 15 of a group of 17 adrenalectomized mice.

Strophanthin proved to be ineffective in the protection of the adrenalectomized mice in any of the 8 concentrations tested. No significant difference could be noted between the strophanthin injected and uninjected animals on either of the two criteria used; that is, number of animals alive 10 days post-operative, or the average survival of those animals dying before the tenth day. Strophanthin proved to be toxic in doses of 50 and 100 μg , respectively. All the animals were dead within 24 hours after the first injection of strophanthin at these concentrations.

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