

Possibly further studies will show that the response of cervical epithelium to the pituitary stimulus is due to its being a derivative of the coelomic epithelium.

5090

Hypoglycemia in Protracted Anaphylactic and Tuberculin Shock.

L. DIENES.

From the Von Ruck Research Laboratory for Tuberculosis, Asheville, N. C.

When guinea pigs die in protracted anaphylactic shock,¹ death is usually preceded by a comatose condition with intermittent forced breathing and occasional convulsions. Sometimes this condition, in which the animals are insensitive to pain, lasts for several hours. These cases are suggestive that the comatose condition is produced by factors which are not present in the milder forms of the anaphylactic intoxication or in those cases where death occurs earlier after injection. The examination of the sugar content of the blood seemed indicated as the liver plays an important rôle in the production of protracted anaphylactic shock, also it is known that anaphylactic shock has a pronounced influence on the sugar content of the blood.² In addition in different bacterial intoxications hypoglycemia was observed.³

TABLE I.
Sugar Content of the Blood of Guinea Pigs Dying in Protracted Anaphylactic and Tuberculin Shock.

Guinea Pig	Interval Between Injection and Death. Hours	Sugar in the Blood
331	3	.28
334	3	.22
373	2	.20
476	3½	.03
473	6	.035
412	9	.03
156	3	.15
157	6½	.095
187	22	.08
484	4½	.025
486	5	.03
127	8	.03

¹ Dienes, L., *PROC. SOC. EXP. BIOL. AND MED.*, 1930, xxvii, 690.

² Zeckwer, I. T., and Nadler, J. E., *J. Exp. Med.*, 1929, xlix, 481.

³ Menten, M. L., and Kipp, H. A., *J. Infect. Dis.*, 1930, xli, 267.

The data given in the table are typical. Death, both in protracted anaphylactic shock and in tuberculin shock might occur with high, normal, or very low sugar values in the blood. In anaphylactic shock during the first 2-3 hours after the injection (also when the guinea pig dies in acute shock, or survives) the sugar content of the blood is increased. Later in the severe or fatal shock we find very low sugar values. This regularity was not as pronounced in tuberculin shock, probably because the stage and extent of the disease influences the reaction of the animal.

It is probable that the excessive hypoglycemia plays a rôle in the death of the animal. The occurrence of death both with high and with very low sugar values indicates that death is caused by different combinations of factors, both in protracted anaphylactic shock and in tuberculin shock.

The sugar determinations were made with the new method of Folin and Wu,⁴ and in a number of cases we made parallel determinations, using the method of Hagedorn and Jensen.⁵ The blood was taken from the heart before the death of the animal.

5091

Ergotoxine Miosis.

F. F. YONKMAN. (Introduced by Sanford B. Hooker.)

From the Department of Pharmacology, Boston University, and Evans Memorial Hospital.

In 1906 Dale¹ demonstrated constriction of the cat's iris by ergotoxine and attributed this to direct stimulation of the iris sphincter. Recently Koppanyi² reported that a sufficient concentration of ergotamine injected intraocularly paralyzes the motor sympathetic terminations in the dilatator pupillae and stated that the abolition of sympathetic tonus was sufficient basis for explanation of ergotoxine constriction.

Our results of numerous studies on the isolated sphincter muscle of the iris in an oxygenated Locke-Ringer bath warrant the support of Dale's conclusion that ergotoxine constricts this muscle to a con-

⁴ Folin, O., *J. Biol. Chem.*, 1929, lxxxii, 83.

⁵ Hagedorn, H. C., and Jensen, B. W., *Biochemische Z.*, 1923, cxxxv, 46.

¹ Dale, H. H., *J. Physiol.*, 1906, xxxiv, 163.

² Koppanyi, T., *J. Pharm. and Exp. Therap.*, 1930, xxxviii, 101.