

8956 P

Blood Pressure of the Woodchuck and its Response to Injections of Histamine and Epinephrine.

HIRAM E. ESSEX.

From the Division of Experimental Medicine, The Mayo Foundation, Rochester, Minnesota.

Opportunity was afforded recently of measuring the blood pressure of the woodchuck. Two fine male specimens weighing 1.7 and 2.5 kg. respectively were obtained for another purpose but before the animals were killed they were etherized. A cannula was inserted into the left femoral artery of each animal and the blood pressure recorded in the usual manner. The initial value for the blood pressure of the larger animal was about 135 mm. of mercury, while that of the smaller animal was about 90 mm. of mercury. As compared with the blood pressure of the rabbit that of the larger woodchuck was considerably higher but the blood pressure of the smaller animal was about equal to that of the rabbit.

Since it is well known that the blood pressure of a rabbit may be elevated or depressed by appropriate doses of histamine given intravenously, I was interested in determining the effect of this amine on the blood pressure of another rodent, such as the woodchuck. Doses of 0.1 mg. of histamine given intravenously to both woodchucks caused a marked fall in blood pressure. After the blood pressure had returned to the control level, another dose of the same size caused a comparable effect.

In response to an injection of 0.1 cc. of 1:1000 solution of epine-

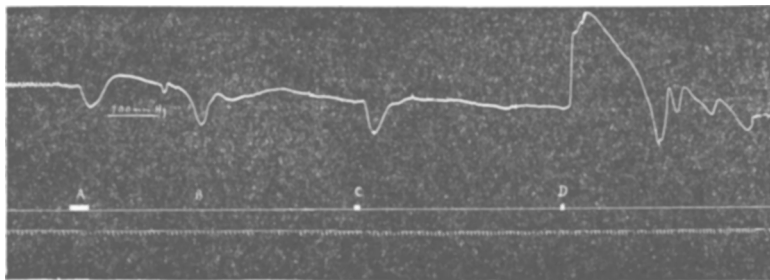


FIG. 1.

From above downward: blood pressure tracing of woodchuck; signal marks; and zero line; time in intervals of 5 seconds. At signal mark A, 0.1 mg. of histamine was given intravenously; at B the thorax was compressed; at C, 0.1 mg. of histamine was given intravenously; at D, 0.1 cc. 1:1000 epinephrine was given intravenously.

phrine given intravenously, the value for the blood pressure of each of the woodchucks was raised to about 200 mm. of mercury. There was considerable fluctuation below and above the control level but the blood pressure became stabilized within 4 minutes. At the completion of these observations, the animals were killed (Fig. 1).

8957 C

Carcinoma-Like Proliferations in Vagina, Cervix, and Uterus of Mouse Treated with Estrogenic Hormones.*

LEO LOEB, E. L. BURNS, V. SUNTZEFF AND M. MOSKOP.

From the Department of Pathology, Washington University School of Medicine, St. Louis, Mo.

We have referred¹ to the fact that in mice injected with preparations of estrogenic hormones over long periods of time abnormal proliferations of varying degrees of intensity may be induced not only in the mammary gland but also in certain parts of the vagina, cervix, and uterus. In a number of cases conditions were observed which in human beings would be considered precancerous lesions or as changes representing very early stages of cancer. In the monkey, Overholser and Allen² noted that in the cervix atypical epithelial proliferations were induced through administration of ovarian hormones. However, these investigators added traumatization of the tissue to the action of the hormones, while in our experiments the tissues were left intact. In two recent publications Lacassagne³ described adenomatous proliferations of the uterine glands in the rabbit and in the mouse; in some cases the glands penetrated through the muscular layer. Quite recently we have autopsied a mouse in which proliferative changes had progressed further than in any of the others observed. This mouse, of the "Old Buffalo" strain in which spontaneous tumors are relatively rare, had been injected with estrogenic hormones for 24 months, 20 days, beginning at the age of 18 days. During the first 18

* These investigations were carried out with the aid of a grant from the International Cancer Research Foundation.

¹ Loeb, Leo, Burns, E. L., Suntzeff, V., and Moskop, M., *Canad. Med. Assn. J.*, 1936, **35**, 117.

² Overholser, M. D., and Allen, E., *Proc. Soc. Exp. Biol. and Med.*, 1933, **30**, 1322.

³ Lacassagne, A., *C. R. Soc. Biol.*, 1935, **120**, 685, 1156.