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Blood Amylase Response to Acetyl-Beta-Methylcholine Chloride in Rabbits.*

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(Introduced by H. Sobotka.)

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In the course of our studies on the blood amylase response to acetyl-beta-methylcholine,^{†1, 2} we attempted to use, for practical reasons, the rabbit as a test animal instead of the dog.

The drug was administered intramuscularly to 13 rabbits, and 24 experiments were performed in this group. The blood amylase was determined prior to and 3 hours after the administration of 4 mg. acetyl-beta-methylcholine chloride. All of the rabbits weighed between 2 and 3 kilos. The fasting blood amylase titre varied from 4.6 to 12.4 units. A marked response was obtained in 18 tests; in 5 there was not so conspicuous a change, and in one no rise was elicited.

The viscosimetric method utilized for these determinations was identical with that reported in the original communication.¹ The findings are summarized in Table I.

It will be noted that in Rabbit 99 a marked blood amylase response was obtained on Sept. 10 and Sept. 16, but that on Sept. 13 the rise was inconspicuous. In Rabbit 13 on Oct. 3 and Oct. 16 the amylase did not reach the level of Oct. 9. In Rabbit 2 there was no response on Oct. 1, while on Oct. 4 more than a 100% increase in the blood amylase was elicited.

As controls saline, 1 mg. histamine, and 5 minims of adrenalin were tested on 6 animals, all of which failed to evoke a rise in the blood amylase titre.

Conclusion. 1. In rabbits, as in dogs, there is a rise in blood amylase following the intramuscular injection of acetyl-beta-methylcholine chloride. 2. The blood amylase response of rabbits to acetyl-beta-methylcholine chloride is not as constant as in dogs.

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† Meeholyl-Merek.

¹ Antopol, W., Schifrin, A., and Tuchman, L., *PROC. SOC. EXP. BIOL. AND MED.*, 1934, **32**, 383.

² Tuchman, L., Schifrin, A., and Antopol, W., *ibid.*, 1935, **33**, 142.

TABLE I.

Rabbit	Date	Initial blood amylase units	Blood amylase units 3 hrs. after injection of 4 mg. acetyl-beta-methylcholine chloride
97	9/9	11.0	50
99	9/10	4.6	46
	9/13	6.0	10
	9/16	6.0	30
95	9/19	10.0	82
	9/24	10.0	76
98	9/23	11.0	82
	9/25	8.0	18
3	9/27	12.4	34
	9/30	8.4	100
2	10/1	8.0	8
	10/4	8.8	20
13	10/3	6.0	10
	10/9	7.2	36
	10/16	7.2	12
890	10/8	8.0	150
105	10/15	10.0	50
	10/17	10.0	38
100	10/21	7.6	25
101	10/22	6.2	32
27	2/7	10.0	50
	2/17	8.0	25
6	2/7	10.0	13
	2/17	8.0	28