

FIG. 6.

The fold of skin on the anterior cervical region of a male rabbit treated with estrogenic substance.

were terminated in ejaculation of semen by the normal male, but no spermatozoa could be found in the vestibulum-like structure of the receptive animal.

7938 P

Rate of Formation of Acetylcholine in Placenta In Vitro.

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We have demonstrated that placental acetylcholine originates in the syncytial layer of the villus, and that it exists in a free form.¹

¹ Wen, I. C., Chang, H. C., and Wong, A., to be published.

We now have evidence that it also exists in a reserve form. The former can be readily extracted by alcohol, and quite satisfactorily by saline, providing precaution is taken to prevent the activity of cholinesterase with sufficient eserine and handling at ice-cold temperature. The latter appears to be liberated on incubation of the placenta at a favorable temperature, *viz.*, 37°C. The present report deals with the rate of liberation of this reserve acetylcholine from its precursor *in vitro*.

Five experiments have given similar results, one of which will be briefly presented. In this particular experiment, a placenta which was freed from its foetal membrane and cord was minced and divided into 18 lots each weighing 20 gm. Three series of observations were carried out, one with eserine represented by EC, E11, E12, E13, E14, and E15, and 2 without designated by C, 11, 12, 13, 14, 15 and C', 11', 12', 13', 14', 15'; each series thus consisted of 6 samples. Three cc. eserine solution (25 mg. eserine salicylate) were added to each sample of the eserine series, while 3 cc. saline were added to each of the non-eserine series before starting the experiment. The control samples of the 3 series were immediately extracted for their free acetylcholine with 2 volumes of 96% alcohol in the ice chest for 17.5 hours. The rest were incubated at 37°C., one sample from each series being removed at hourly intervals for similar extraction of the same duration. At the end of extraction, the tissues were squeezed through gauze, the weight of residue being taken and the filtrate refiltered and measured before storage on ice. The rectus test² was used for assay. Fig. 1 shows the complete record of the assay of these 18 samples on the same eserinized rectus against the same acetylcholine chloride standard, while Fig. 2 shows the result plotted against time.

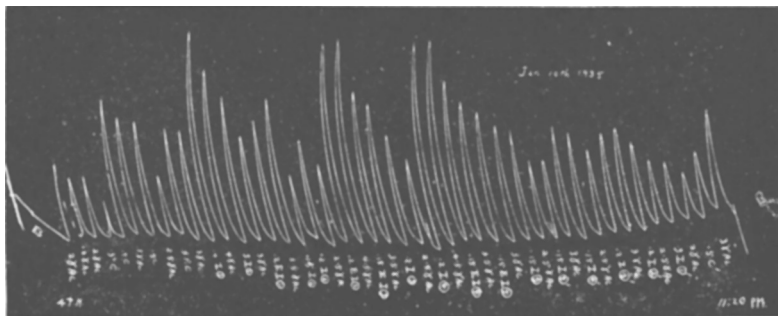


FIG. 1.

² Chang, H. C., and Gaddum, J. H., *J. Physiol.*, 1933, **79**, 255.

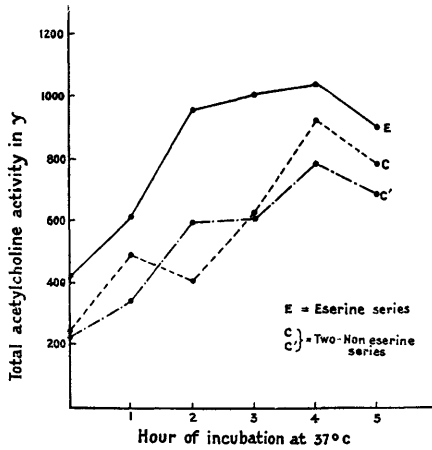


FIG. 2.

The liberation of reserve acetylcholine increases during incubation and reaches a maximum at the 4th hour, the average hourly increment during the first 4 hours being 169, 138 γ acetylcholine activity for the 2 non-eserine series respectively. Under the protection of eserine, the initial free acetylcholine activity was higher but the average increment during incubation was only 119 γ per hour.

Elucidation of the mechanism and significance of the present finding in relation to our previous claim^{3, 4} constitutes some of the objectives of the experiments which are now in progress.

7939 P

In Vitro Experiments on the Viability and Excystment of Paragonimus Cyst.

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Cysts were obtained from infected crabs (*Potamon denticulatus* Milne-Edwards) collected from Lan Ting, where the first 2 human cases of paragonimiasis in China were reported by Ying.¹

Experiments were carried out in hollow glass slides in which

³ Chang, H. C., and Wong, A., *Chinese J. Physiol.*, 1933, **7**, 151.

⁴ Wong, A., and Chang, H. C., *Chinese Med. J.*, 1933, **47**, 987.

¹ Ying, Y. Y., *Nat. Med. J. China*, 1930, **16**, 638.