

The observation that glutathione, which contains -SH groups, is affected by CAP is of significance. It is conceivable that the reduction of glutathione observed might have been reflected in the fall of induction capacity of the Hensen's node on treatment with chloroacetophenone¹¹.

Zusammenfassung. Die Organisationsregion von Hühnchenembryonen wurde mit CAP behandelt und die Wirkung des CAP auf schwefelhaltige Aminosäuren papierchromatographisch untersucht. Die Analyse ergab, dass Glutathion stärker beeinflusst wurde als Methionin. Die Reduktion des Glutathiongehaltes könnte dem Abfall der Induktionskapazität des Hensenschen Knotens entspre-

chen, der durch die Behandlung mit CAP hervorgerufen wird.

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Secretion of Saliva in the Rabbit after Postganglionic Parasympathetic Denervation

One to three days after postganglionic parasympathetic denervation the parotid gland of the cat shows a secretory activity occurring in bursts and assumed to be due to a paroxysmal release of acetylcholine from the degenerating nerve-endings¹. A similar, although more continuous, 'degeneration secretion' has been observed in submaxillary and sublingual glands of cats^{2,3} and dogs⁴.

In the present experiments the effect of unilateral postganglionic parasympathetic denervation of the submaxillary and parotid glands was studied in rabbits. As in cats³ the chorda tympani was dissected along the submaxillary duct and cut as close to the gland as possible. The parotid gland was denervated by section of the auriculotemporal nerve, which contains its parasympathetic secretory fibres⁵. Morphine-urethane was used for the former, ether anaesthesia for the latter operation.

One to five days later acute experiments in urethane anaesthesia were carried out. The parotid ducts were exposed and cannulated; the submaxillary ducts were can-

nulated through the mouth. The cannulae used gave about 50 drops out of 1 ml of distilled water.

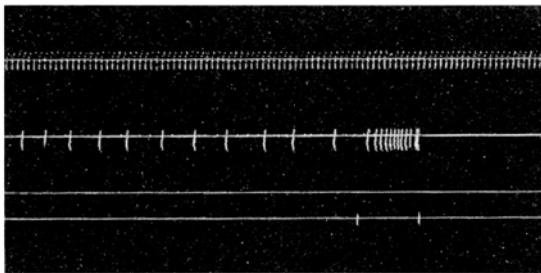
One to three days after section of the auriculotemporal nerve the parotid gland of the rabbit showed a 'degeneration secretion'; the flow was particularly marked on the first two days, when drops of saliva could fall with intervals of 3–5 min. The secretion appeared in paroxysms with intervals of 1–2 min. It was increased by eserine and abolished by Hoechst 9980 ($\alpha\alpha$ -diphenyl- γ -piperidino-butylamide) as shown in the Figure, and must therefore be assumed to be caused by acetylcholine.

Contrary to the parotid gland, the submaxillary gland of the rabbit is normally in a permanent state of spontaneous activity⁶. One to three days after the operation a 'degeneration secretion' could be observed in the submaxillary gland, superimposed on the slow spontaneous flow. During the first two days, when the flow was particularly pronounced, drops of saliva fell every 4–6 min from the denervated gland whereas the contralateral, normal gland secreted about one drop per h. The 'degeneration secretion' was much more regular in the submaxillary than in the parotid glands; only in some few rabbits there was a tendency to paroxysmal flow from the submaxillary glands. Eserine augmented the flow and Hoechst 9980 reduced it to the level seen in the normal gland.

Zusammenfassung. Eine Degenerationssekretion erscheint beim Kaninchen in den ersten drei Tagen nach postganglionär-parasympathischer Denervierung der Submaxillaris- und Parotisdrüsen.

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'Degeneration secretion' from left parotid gland of the rabbit. Tracings from above: time in min; drops of saliva from left denervated gland; right control gland; signal. Postganglionic, parasympathetic denervation of left gland 24 h before the experiment. At first signal 100 μ g eserine/kg, at second signal 100 μ g Hoechst 9980/kg was given intravenously.

¹ N. EMMELIN and B. C. R. STRÖMBLAD, *J. Physiol.* **143**, 506 (1958).

² N. EMMELIN, *J. Physiol.* **154**, 1-2P (1960).

³ N. EMMELIN, *J. Physiol.* **162**, 270 (1962).

⁴ D. A. COATS and N. EMMELIN, *Exper.* **18**, 177 (1962).

⁵ I. NORDENFELT and P. OHLIN, not published.

⁶ I. NORDENFELT and P. OHLIN, *Acta physiol. scand.* **41**, 12 (1957).

The 5-Hydroxytryptamine Content of the Brain and Some Other Organs of the Hedgehog (*Eri-naceus europaeus*) During Activity and Hibernation

Hess¹ compares hibernation with the state of sleep and considers both these conditions to be dependent upon an

autonomic central regulation. According to this opinion the functional balance in both these states is shifted towards a trophotropic predominance. SUOMALAINEN² considers that sympathetic hypofunction is essential to hiber-

¹ W. R. HESS, *Z. vgl. Physiol.* **26**, 529 (1939).

² P. SUOMALAINEN, *Biochem. Z.* **295**, 145 (1938).