

εὐαισθησίαν τοῦ ὀρθοῦ μυὸς εἰς τὴν ACH in vitro. Ἐνταῦθα ἐξετάσαμεν ποία εἶναι ἡ εὐαισθησία τοῦ ὀρθοῦ μυὸς εἰς τὴν ACH, ἐὰν τὰ ἄνωθι φάρμακα δὲν ἐξετασθῶν in vitro ἀλλὰ ἐνεθοῦν παρεντερικῶς εἰς βατράχους. Ἡ ἐξέτασις ἐγένετο κατὰ τὴν μέθοδον Spurrel (4). Ἐκ τῆς γενομένης δ' ἐρεῦνης ἀπεδείχθη ὅτι ἡ εὐαισθησία εἰς τὴν ACH τοῦ ὀρθοῦ μυὸς βατράχων λαβόντων παρεντερικῶς γλωράλην, στρυχνίνην ἢ δακτυλίτιδα δὲν μεταβάλλεται.

B I B L I O G R A P H Y

- 1) *Kuffler*, New York Academy of Sciences. Vol. XL. VII. Art. 6 pg. 769.
- 2) *C. Torda, H. G. Wolff*:
 - a) Biol. abstr. 22 2118 20929
 - b) » » 22 1598 16273
 - c) Chem. » 1948 2019
 - d) » » 1948 3082
 - e) » » 1943 3831
- 3) *H. Mazella*, Biol. abstr. 5779, 1947, 21.
- 4) *Exp. Physiology, D. T. Harris*, 4th ed. J. A. Churchill, London 1947.
- 5) *J. Finerty, R. Gesell*, Am. J. of Phys. 145, 1. 1945.
- 6) *Ambach*. Journ. of Phys. 104 1945.

ΦΑΡΜΑΚΟΛΟΓΙΑ.—**Experimental investigations on the toxic action of rhodanates in the rabbits, by N. Klissianis***. Ἀνεκοινώθη ὑπὸ τοῦ κ. Γεωργ. Ἰωακείμογλου.

NaSCN has been used in hypertension. Unfortunately side actions as asthenia, exanthemes and symptoms of centr. nerv. syst. stimulation etc. do not allow a safe dosage. From the available literature we have found many experiments which could suggest various explanations of the above disturbances. These are summarised in the list below.

- a) Musclicaction (1).
- b) Blocking of respiratory enzymes (histotoxic hypoxia) (2).
- c) Production of -CN in vivo (3).
- d) Displacement of Cl' or I' by -SCN, an action analogous to Br' action.
- e) Sensitization to K. (4).

* Ν. ΚΛΕΙΣΙΟΥΝΗΣ, Πειραματικά ἔρευνα ἑπι τῆς ἐνεργείας τοῦ ροδανικοῦ νατρίου εἰς κονίχλους.

f) Antithyroid action, because SCN hinders I' from being taken up by thyroid (5,6).

g) Sensitization to Ach (7).

h) Atrophy of the surrenal cortex (8).

In the following we will describe some experiments which have been made in an effort to give an answer to some of the above mentioned points. In a first series of rabbits we have injected NaSCN and simultaneously a mixture of various electrolytes. In a second series we gave simultaneously to the rhodanate antihist. drugs, because some of the symptoms of this intoxication seem to us of an allergic nature. In a third series of rabbits we have given simultaneously to the animals the common antidotes of HCN poisoning, to neutralize a CN - effect in vivo. In one animal Bal, has been also used on account of the statement that Bal in mixture with KCN antagonizes CN - effect. (9) The animals were divided in two groups i. e. to one group was injected NaSCN only and to the others NaSCN and antidote. The -SCN doses used were sublethal (0,2 - 0,4g.).

NaSCN is very hygroscopic so that in most of the experiments we checked the solution injected through titration according to the Volhard method. These injections have been given daily till death intervened. The length of surviving time in comparison with the controls has served to us as an index of the action of the antidote. We used a 9-13,0% NaSCN solution subcutan. In another place of the skin we injected simultaneously with NaSCN a mixture of electrolytes NaCl + CaCl₂ or only one salt of this mixture. These salts were given in a concentr. of 20% for NaCl and 10% for CaCl₂. In the other two series Benadryl was injected subcut. or methylene blue intraperit + Na₂S₂O₃ subc. or Bal. A single dose of NaSCN even lethal does not cause death immediately. Death comes later approxim. after two days with the following signs. Animal loses weight, does not eat and shows somnolence. A spastic paralysis has also been observed.

In table I it is shown that NaSCN given alone to 4 rabbits in doses from 0,4-0,5g daily was lethal in 1-3 days. 8 animals were injected in the same way with rhodanate and simultaneously with a mixture of NaCl ± CaCl₂ (Table II). 5 from these animals died as the controls but the rest survived longer. In the series where Benadryl, Methylene blue + Na₂S₂O₃ or Bal was injected no action of the antidote was observed. It seems that treatment of the -SCN poisoning of the rabbit in the way as above described, does not prolong surviving time.

TABLE I.

Nr.	Weight	NaSCN p./Kg	Time of administr. until death
1	1080	0,4	2 days
2	1800	0,4	»
3	1750	0,5	1 »
4	1800	0,4	2 »

TABLE II.

Nr.	Weight	NaSCN p. Kg.	CaCl ₂ p. Kg.	NaCl p. Kilg.	Time of administr. until death
1	1,22	0,4	0,15—0,2	1	5 days
2	1,37	0,4	0,15	—	2 »
3	1,20	»	—	1	2 »
4	1,0	»	0,15	1	6 »
5	1,1	»	»	»	3 »
6	1,2	0,2—0,4	0,05—0,1	0,5—1	4 »
7	2,29	0,4	0,1	1	1 »
8	1,75	0,4	0,1	1	1 »

TABLE III.

Nr.	Weight	NaSCN p. kil.	Benadryl. g.	Meth. blue + Na ₂ S ₂ O ₃ g.	Bal. g.	Time of admin. until death
1	1,8	0,4	0,05	—	—	2 days
2	2,15	0,5	—	0,05 + 2g.	—	1 »
3	1,7	0,4	—	—	0,05	1 »

Π Ε Ρ Ι Λ Η Ψ Ι Σ

NaSCN χρησιμοποιεῖται κατὰ τῆς ὑπερτάσεως ὡς ὑποτασικὸν φάρμακον. Διάφοροι ἀνεπιθύμητοι ἐνέργειαι ἐμφανιζόμεναι κατὰ τὴν χρῆσιν αὐτοῦ καθιστοῦν τὴν χορήγησιν αὐτοῦ ἐπικίνδυνον. Ἡ πειραματικὴ βιβλιογραφία τῶν τελευταίων ἐτῶν ἀποδίδει τὴν τοξικότητα αὐτοῦ εἰς διαφόρους αἰτίας (πρβλ. βιβλιογρ.). Ἐν τοῖς ἐπομένοις ἐξητάσαμεν ἐπὶ κονίκλων, ἐὰν 1) ἡ χορήγησις ἠλεκτρολυτῶν ὡς NaCl + CaCl₂, 2) ἡ χορήγησις ἀντισταμινικῶν 3) ἡ χορήγησις τῶν κοινῶν ἀντιδότην τῆς δηλητηριάσεως διὰ CN 4) BaI δύνανται νὰ ἐπηρεάσουν τὴν δηλητηρίασιν ταύτην.

Ἐκ τῶν γενομένων πειραμάτων, ὧν ὁ μικρὸς ἀριθμὸς δὲν ἐπιτρέπει στατιστικὸν ἔλεγχον, προκύπτει ὅτι τὰ ὡς ἄνω ἐφαρμοσθέντα ἀντίδοτα δὲν παρατείνουν τὴν ζωὴν τῶν δι' -SCN δηλητηριασθέντων κονίκλων.

BIBLIOGRAPHY

(1)	Chem.	Zbl.	1938	11	1548.
(2)	»	Abstr.	1942	7582	
(3)	»	»	1953	625	47
(4)	»	»	1949	43	8056
(5)	»	»	1949	3111	8
(6)	»	»	1949	43	14
(7)	Biol.	Abstr.	1947	5744 - 5748	
(8)	J. am. med. ass.		1951	147	14
(9)	Ch. abstr.		1952	6270	