basis adaptation of this order would be due to the production of receptors different from those found in dye susceptible strains, by which the nutrition (sc. reproduction) of the organism could be carried on, and which either possesses no affinity for the dye in question or through which the organism can bring about its cleavage. A limited number of observations would suggest that in the treatment of certain infections, with staphylococci and streptococci more especially, certain dyes might be used to advantage. In two cases of erysipelas the repeated local application of the concentrated solution of dahlia seemed to restrict the extension of the infection.

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Waxy degeneration of muscle in venom intoxication.

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In connection with the discussion by Beneke[1] and Wells[2] of waxy degeneration of muscle occurring in anaphylactic poisoning, and especially in view of Beneke's reference to the action of " brasilianischen Schlangengift " (*Crotalus terrificus*) the following notes on waxy degeneration in the rabbit following the intravenous injection of the venom of *Crotalus adamanteus* may be of interest.

In the course of three series[3] of experiments on a total of about 45 rabbits it was noted that the intravenous injection of venom was followed in three instances by waxy degeneration so well-marked as to be evident macroscopically. In two of the

[1] Beneke, R., "Ueber den Kernikterus der Neugeborenen," *Münch. med. Wochenschr.*, 1912, LIX, 387; "Ueber Muskelveränderungen bei akuten Vergiftungen mit Klapperschlangengift sowie bei Anaphylaxie," *Münch. med. Woch.*, 1912, LIX, 729; Beneke, R., and Steinschneider, E., "Zur Kenntnis der anaphylaktischen Giftwirkungen," *Centralb. f. allg. Path. u. path. Anat.*, 1912, XXIII, 529.

[2] Wells, H. Gideon, "Anaphylaxie und Wachsartige Degeneration der Muskeln," *Centralb. f. allg. Path. u. path. Anat.*, 1912, XIII, 945.

[3] Pearce, R. M., "An Experimental Study of the Relative Importance of Renal Injury, Vascular Injury and Plethoric Hydremia in the Production of Edema," *Arch. f. Int. Med.*, 1909, III, 422; "An Experimental Glomerular Lesion Caused by Venom (*Crotalus Adamanteus*), *Jour. Exper. Med.*, 1909, XI, 532; "Experimental Studies of the Influence of Crotalus Venom on the Kidney," *Jour. Exper. Med.*, in press.

animals, attention was called to the lesion by the presence of pale opaque focal area in the psoas mucsle. Microscopical examination of these areas showed that the muscle fibers were irregular in shape, had lost their nuclei and striation and presented the typical hyaline appearance of Zenker's degeneration as it occurs in man. In these animals the adjacent tissue showed no hemorrhage, exudate or evidence of connective tissue reaction. The animals died after 18 and 35 days respectively, the first having received 8 injections and the second 7 injections of venom in doses varying from 0.5 to 2 milligrams.

A third rabbit died on the 38th day after the first injection, having received nine injections, the last on the 23d day. At autopsy mottled hemorrhages were seen in the rectus and psoas muscles and about these hemorrhages, the peculiar opaque, whitish appearance of hyaline degeneration. Upon microscopical examination, the picture was identical with that of true Zenker's degeneration. Irregular, swollen, vacuolated and varicose, hyaline fibers, more or less fractured, without nuclei and invaded by leucocytes occupied large irregular areas. In the midst of these fibers were foci of hemorrhage and throughout an infiltration of polymorphonuclear leucocytes, while about the necrotic areas were wide bands of granulation tissue which sent prolongations between the bundles of muscle fibers. In such areas the surviving fibers frequently showed multiple nuclei.

Whether or not these lesions have fundamentally a common relation with those caused by anaphylactic poisons is of course a matter of doubt. It seems wise, however, to add, in support of Beneke's experience with the venom of *Crotalus terrificus*, these observations on the effect of the venom of *Crotalus adamanteus*.

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Note on the effect of animal extracts upon the volume of the thyroid gland.

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The volume of the thyroid was registered by an oncometer and a modified piston recorder. The arterial tension was also noted. The animals used were dogs, etherized and with a small dose of