

combined latent period and length of heat for the 2 substances agrees quite closely: for progesterone it is 11.09 hours; for desoxycorticosterone it is 10.90 hours.

Summary. Desoxycorticosterone resembles progesterone in that it produces pregestational proliferation in the endometrium of immature rabbits and induction of the oestrous receptivity response in spayed guinea pigs. The above experiments indicate that desoxycorticosterone is from 1/6 to 1/10 as potent as progesterone.

10742 P

A New and Effective Method of Treating Canary-Pox.

REGINALD D. MANWELL* AND FREDERICK GOLDSTEIN.

From the Department of Zoology, Syracuse University.

Canary-pox is a variety of fowl-pox, and is capable of causing very severe loss to those who raise canaries or other small birds. Fowl-pox inflicts considerable losses on poultrymen each year, both because of the deaths it causes and the reduction in egg-laying by affected birds. Up to the present there has been no effective treatment for any variety of the disease, although temporary immunization of chickens is possible.

In canaries the pox is highly fatal, the mortality being almost 100%, and also highly contagious. The disease occurs in 2 or possibly 3 forms. In one the earliest indication is a small swelling of the marginal epithelium about the eyes. This rapidly increases in size until within 3 or 4 days the eye is completely closed, and then continues to spread until death occurs which is usually within a week or 10 days. Or a similar nodule may appear about the nostrils, or at the angles of the mouth, and run a rather similar course.

In other canaries the first indication of the disease appears when the bird begins to gasp, and here the fatal outcome of the infection is often even more prompt. Occasionally birds are also seen with scaly or warty growths about the toes and legs, but although this is said to be a manifestation of the same disease, and is frequently associated with epidemics in which cases of the two first-mentioned types are numerous, it runs a much slower course. But here, too, the bird eventually dies, though not perhaps for some weeks or months. In the meantime the claws and even the toes are frequently lost, and the

* Aided in part by a grant-in-aid from the American Philosophical Society.

bird becomes unable to perch. Apparently few studies of canary-pox have so far been made, the only ones known to the authors being those of Kikuth and Gollub,¹ Burnet,² and Reis and Nobrega.³ Correspondence with Dr. Beaudette of the New Jersey Experiment Station and others, however, indicates that the disease is probably of rather frequent occurrence in aviaries, and there is reason to believe that it is also common among wild birds.

Diagnosis of the disease was made not only from the character of the lesions, but also from inclusion bodies. These are of 2 sorts in fowl-pox, larger bodies known as Bollinger bodies, and smaller ones within these which have received the name of Borrel bodies. Filterability of the infectious agent has not yet been established by us, but other authors (Irons⁴) have found this difficult. The strain of the virus used in these experiments proved quite specific when inoculated into chickens, only a very transitory lesion being produced. Canaries could be infected by injection of suspensions of tissue from lesions of other canaries, by injection of blood, or by direct contact of a lesion with the eye of a clean bird. It is probable that infection occurs naturally by such contact, or by contact with perches, or other parts of the cage, since infected birds are always rubbing their heads and bills on such objects. Or infection may take place from contaminated food and water, and quite possibly from mites.

Treatment with mercurochrome has proved highly effective. Of 26 cases in which it has been tried only 3 have died, and these were far advanced when it was started. Alcoholic solutions of 1½% and 3% mercurochrome have been used, and also Scott's solution, but the alcoholic solutions seem more suitable for application. Usually a swab is used, or the solution may be applied between the cornea and the conjunctiva with a small blunt dropper. The amount of treatment needed depends on the case. A week is often enough, but 3 or even more may be required if the case is well advanced when it is first started. Two applications each day are usually sufficient. Cases of both the ophthalmic and the gasping type have been treated with success, and the results are often dramatic. Since the lesions are in the pharynx in the second type of the disease we have allowed birds so affected to swallow a little mercurochrome. Our experience thus far indicates that for this disease this drug comes close to being an almost perfect specific.

¹ Kikuth, W., and Gollub, H., *Zentralbl. f. Bakt.*, I Orig., 1932, **125**, 313.

² Burnet, F. M., *J. Path. and Bact.*, 1933, **37**, 107.

³ Reis, J., and Nobrega, P., *Arch. Inst. Biol.*, 1937, **8**, 211.

⁴ Irons, Vernal, *Am. J. Hyg.*, 1934, **20**, 329.