TRIPHENYL ETHYLENE TESTED ON CAPONS

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It has been shown by Robson and Schönberg (1937) that the synthetic substance triphenyl ethylene is highly oestrogenic when tested on ovariectomized mice; its ability to inhibit the specific effects of progesterone on the endometrium and muscle of the rabbit's uterus (Robson, 1938) demonstrates that it possesses many of the attributes of oestrin. Since oestrin also has a typical gynaecogenic action in that it causes hen-feathering in the capon (Juhn and Gustavson, 1930), it was suggested to me by Dr. J. M. Robson that the ability of triphenyl ethylene to induce a similar effect might be examined. Tests made on old English game capons (bantams) of the black-red variety produced no change in feather-colouring when 1 gramme of substance was injected in two days. It was found, however, that neither do such birds react to 1 mg. of oestrone of the international standard, and in the experience of Dr. Parkes (personal communication) they are comparatively insensitive to oestrin.

When a brown Leghorn capon was injected with a total of 0.8 gramme of triphenyl ethylene in two days a very marked reaction was obtained in both the colouring and the structure of the feathers. Thus, triphenyl ethylene possesses in common with another synthetic compound—diethylstilboestrol (Dodds, Lawson, and Noble, 1938)—oestrogenic and gynaecogenic activity.

The combs of capons injected with 0.8 and 1 gramme of triphenyl ethylene showed no increase in size but actually a slight regression on their previous minimum. A similar absence of effect was observed when 1 gramme in arachis oil was smeared on the comb of another capon. When the equivalent of approximately 0.5 gramme was smeared on the comb of a capon which was at the same time being injected with 1.5 mg. of standardized androsterone there was no inhibition of the response to androsterone.

Summary

1. Triphenyl ethylene causes hen-feathering in the brown Leghorn capon, as does oestrin and diethylstilboestrol.

2. In the amounts used it had no effect on old English game bantams (black-red), which have a low sensitivity to oestrin.

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REFERENCES

- Dodds, E. C., Lawson, W., and Noble, R. L. (1938). *Lancet*, **1**, 1389.
Juhn, M., and Gustavson, R. G. (1930). *Proc. Soc. exp. Biol.*, N.Y., **27**, 747.
Robson, J. M. (1938). *J. Physiol.*, **92**, 401.
— and Schönberg, A. (1937). *Nature*, **140**, 196.

During the past twenty-four years Dr. T. Wilson Parry has devoted much of his spare time to the study of primitive surgical holing (trephining or trepanning) of the human skull, and has published in all seventeen papers on this branch of medical history. He has now presented to the Library of the British Medical Association reprints of these contributions in pamphlet form, which can be consulted there by members interested in the subject.

Clinical Memoranda

Sulphanilamide in Climatic Bubo

Poradenitis venerea (climatic bubo or lymphogranuloma inguinale) is an uncommon disease in Great Britain, and the majority of the cases met with here are seen by the venereal diseases officers in the larger seaports. In the past the treatment of this condition with antimony compounds has been disappointing, and in the only case I have seen treated with vaccine the result was unsuccessful. The cases which reported for diagnosis before the infected glands had broken down have responded satisfactorily to surgical excision, but unfortunately the disease is usually further advanced when first seen and is characterized by extensive adenitis, inflammation of the adjacent tissues, sinus formation, and even involvement of the thigh and abdominal wall. The treatment of such cases has, in my experience, been disheartening to patient and doctor alike, and has required several dressings daily over a period of some months before healing of the sinus has been effected. It may be of interest, therefore, to record the following case, which satisfies the criteria necessary for a diagnosis of climatic bubo, and in which the response to chemotherapy with sulphanilamide has been very encouraging. In this connexion it is of interest to note that Fritz Bär (1938) has studied the experimental action of prontosil album in lymphogranulomatous meningo-encephalitis in mice, and mentions that Gjurić (1938) has recently reported successful results in the treatment of poradenitis venerea with prontosil album and also with a combination of prontosil album and foudadin. Kubitzki (1938) recorded a prompt fall of temperature and local improvement in cases treated with injections of prontosil.

CASE REPORT

The patient, a seaman aged 28, developed a small painless and non-tender swelling in the left groin three days after exposure to infection. A fortnight later the swelling had increased considerably and was then tender and painful. At no time was a genital sore noted. He attended the Seamen's Dispensary, Liverpool, where a diagnosis of climatic bubo was made and admission to hospital advised for excision of the infected glands, but unfortunately the patient refused to accept this advice. The Wassermann reaction at this visit was negative.

Six weeks after the onset of the adenitis the patient came under my observation when he was admitted to the V.D. wards, Mill Road Infirmary, Liverpool. On admission he felt and looked ill, and presented extensive inflammation and matting of the left inguinal glands. The inflammation also affected the tissues adjacent to the infected glands, involving an area which overlapped the left inguinal canal and extended below Poupart's ligament well into the base of Scarpa's triangle. The bubo had already broken down, and a copious, sero-purulent, odourless discharge was draining through two small sinuses. There was no evidence of a genital sore or scar, and a tentative diagnosis of poradenitis venerea was subsequently confirmed by a positive Frei test. The Wassermann reaction was again negative, and an intradermal test with dmelcos vaccine produced no reaction.

Encouraged by the beneficial results of sulphanilamide therapy which I have obtained in cases of chancroidal ulceration, I decided to use this drug in the present case. The patient received 5 grammes daily for two days, 3.5 grammes on the third, fourth, and fifth days, and 2.5 grammes on each of the following eight days. Glycerin and magnesium sulphate dressings were applied locally, and four days later the bridge of necrotic tissue between the two sinuses was excised to facilitate drainage and permit packing the wound with gauze soaked in cod-liver oil. Under this regime the discharge