

Preparations made from other organs such as the spleen in the manner of cortin; and theelin, the female sex hormone of Doisy, and the male hormone of Funk and Harrow, fail to raise the resistance of suprarenalectomized rats.

Experiments are in progress to determine the effect of this extract of the urine on suprarenalectomized cats.

A substance has been extracted from the urine of young human adults which has some of the physiological properties of the cortical hormone of the suprarenal gland.

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Experimental Inoculation of Man and Guinea Pigs with the Virus of Cattle Warts.

MALCOLM H. SOULE AND EARL B. MCKINLEY.

From the Hygienic Laboratory, University of Michigan, and the School of Tropical Medicine, San Juan, Porto Rico.

The etiological agent of human verrucae has been established as a filterable virus by a number of investigators. This was suggested first by Ciuffo¹ and firmly established by Wile and Kingery² and by Kingery.³ Schultz⁴ reported that he had succeeded in transmitting cattle warts to man but the filterable nature of the cattle wart virus was not proven until the work of Creech.⁵ Creech succeeded in producing experimental wart lesions in 15 out of 22 calves with both filtered and unfiltered cattle wart material.

It is becoming more and more apparent that there are many similar diseases to be found in the different species. Studies should be directed towards the discovery of common etiological agents in many of these conditions. The so-called pox diseases of man and animals represent good examples which suggest common or at least closely related etiological factors. Information concerning the relationship of these agents is particularly valuable.

We have attempted to determine a possible relationship between the virus of cattle warts and of the common wart in man. Usually

¹ Ciuffo, G., *Gior. Ital. delle Malattie Venere e della Pelle*, 1907, **48**, 17.

² Wile, U., and Kingery, L. B., *J. Am. Med. Assn.*, 1919, **73**, 970.

³ Kingery, L. B., *J. Am. Med. Assn.*, 1921, **76**, 440.

⁴ Schultz, F., *Deut. Med. Wchnschr.*, 1908, **34**, 423.

⁵ Creech, G. T., *J. Agric. Res.*, 1929, **39**, 723.

4 or 5 cattle warts have been excised, brought to the laboratory, washed and placed in 50% glycerin in the ice box for several hours. These warts were then cut up in fine particles with sterile instruments and ground up in sterile test glasses with sand. After emulsifying with saline part of the emulsion was filtered through Berkefeld N filters. Human subjects and guinea pigs were inoculated intracutaneously with the wart emulsions.

One of us (McK) had demonstrated that unfiltered cattle wart emulsion gave rise in guinea pigs to new growths of the proliferating type characteristic of verruca. The experimental lesions were not so marked with the filtered material although mild lesions were produced. In 2 human subjects no lesions were produced even after one year incubation.

Recently we have studied this question again, utilizing the same methods as before except that a larger number of cattle warts have been used in the preparation of the virus emulsions. Twelve or fifteen of these lesions have been obtained and the freshest of them have been employed for the inoculation experiments. The emulsions were highly concentrated. Three human subjects, including ourselves, were inoculated intradermally and over 20 guinea pigs were injected with the same material. Suggestive lesions were again obtained in guinea pigs but none of the 3 human subjects have shown any signs of lesions after nearly 5 months' incubation. Creech⁵ reports that the experimental lesions obtained by him in young calves appeared usually within the second or third month. Wile and Kingery² report an incubation period of from 4 to 7 weeks with experimental warts in man although second generation lesions required nearly 6 months according to Kingery.³

Our experiments so far would indicate no relation existing between the viruses of cattle warts and human warts in spite of the positive results obtained by Schultz.⁴ However, since these experiments are based presumably upon a single strain of cattle warts (coming from one herd) this should not be taken as final evidence that the viruses of both human and cattle verruca are not biologically related.