

The experimental method employed was as follows: The sheath of the animal was drawn forward to form a pouch into which was instilled 0.05 c.c. of a testicular emulsion rich in spirochetes. About 30 seconds were allowed for the emulsion to spread before releasing the sheath. Most of the fluid then ran out and between 0.04 and 0.05 c.c. could be recovered showing that only a thin film of the emulsion was retained. Infection was first indicated by enlargement and induration of the inguinal lymphnodes and later by the development of a general lymphadenitis with syphilitic lesions in other parts of the body.

All animals thus far inoculated by this method have become infected. In some of them, enlargement and induration of the inguinal nodes was clearly recognizable within 24 hours after the application of the emulsion. Thus far (5 weeks) only one of the animals has developed a visible lesion on either the penis or the sheath, although several of them have characteristic lesions in the testicles and scrotum.

The observations on these animals are not yet complete and the full significance of the experiments cannot be ascertained until the course of the infection has been followed much longer. Similar experiments with other mucous membranes are in progress.

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Neoplasia in experimental syphilis.

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Neoplasia as a sequel to syphilitic infection is not uncommon in man but has never been recorded in an experimental animal. Recently, we have observed an atypical growth arising from the scar of an old syphilitic lesion in the scrotum of a rabbit which may prove to be a neoplasm.

The animal was inoculated in the scrotum, June 16, 1916. Small chancres developed and then underwent spontaneous regression. Several months later, there was a recurrence and the lesion in the left scrotum persisted for some time. In October, 1920, there was a slight diffuse infiltration of the left scrotum

and a small nodule appeared at the site of the old chancre. Although it was known that the animal still harbored spirochetes,¹ none could be demonstrated by dark-field examination of material from the nodule and it was excised for histological examination. There was a prompt recurrence and with the growth of the second cutaneous lesion, the left inguinal glands became markedly enlarged and indurated. Again no spirochetes could be demonstrated and the lesion with one of the adjacent glands was excised under ether anesthesia. Histological examination of the cutaneous nodules and gland showed a growth which presented more the appearance of a neoplasm than of a syphilitic lesion. It was composed for the most part of atypical epithelioid cells undergoing active proliferation and exhibiting marked invasive tendencies.

Meantime there was a second recurrence and extension of the skin lesion over the mid line at the pubis with enlargement and induration of the right inguinal nodes. A deterioration in the physical condition of the animal was then apparent and progressed very rapidly, culminating in emaciation, weakness, severe anemia, loss of sphincter control with some spasticity of the hind legs and the formation of trophic ulcers about the anus and sheath. On this account, the animal was etherized.

Post-mortem examination revealed a widespread distribution of nodules identical in character with the original lesions. These were most abundant in the liver and bone marrow but were also present in other organs such as the spleen, the lungs and the kidneys.

Transplantation of material from an inguinal node gave a vigorous growth in the original animal and attempts to transfer the growth to other animals have apparently been successful.

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The pharmacology of acetone.

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The action of acetone was studied on cats and dogs under light ether anesthesia as well as on the isolated heart of the frog and

¹ See account of rabbit No. 1, *Amer. Jour. Syph.*, 1921, v, 1.