

New York Section.

New York Academy of Medicine, October 21, 1931.

5700

Fresh Raw Aqueous Spleen Extract in Tuberculosis.

GEORGE F. WATSON. (Introduced by F. F. Tisdall.)

From Kitchener, Ontario.

Forty-eight guinea pigs, averaging about 225 gm. were divided into 2 groups of 24 each. On February 24th, 1931, those to be treated were given $\frac{1}{4}$ cc. of spleen extract subcutaneously in the left groin, and on March 3rd they were given $\frac{3}{8}$ cc. On March 5th both groups were inoculated subcutaneously in the right groin with $\frac{1}{2}$ cc. of an emulsion containing a human strain of *Tuberculosis bacilli*, 4 bacilli to a high powered microscopic field. The treated group were then given $\frac{3}{8}$ cc. of spleen extract every second day.

TABLE I.

Date	Guinea Pigs Treated by Spleen Extract No. Died	Untreated Guinea Pigs No. Died
March 26	1	3
April 9	0	5
" 16	0	5
" 23	1	2
" 30	0	3
May 5	0	1
" 9	2	2
Total	4	21

In other words, 83.3% of the treated animals were living as compared with 12.5% of the untreated on May 9th.

Both treated and untreated groups at necropsy showed hypertrophy of the spleen.

In each treated animal at the site of the inoculation a swelling developed which contained caseous material. The untreated animals

did not show this. In other experiments the inguinal glands of untreated animals have suppurated at the site of inoculation and a grey sloughing ulcer resulted. No ulceration has been seen in the treated pigs. Guinea pigs of about 225 gm. in weight are much better for this experiment than the larger pigs, as the smaller animals have practically no spleen and, if given a fairly large dose of *Tuberculosis bacilli*, the controls die early, while, by giving spleen to the other group, one is able to carry on a large percentage for some time.

5701

Changes in Weight of Thyroid Gland of Guinea Pigs Under the Influence of Acid Extract of Anterior Pituitary.*

LEO LOEB AND HILDA FRIEDMAN.

From the Department of Pathology, Washington University School of Medicine.

Loeb, Bassett, and Hilda Friedman^{1, 2, 3} have shown that intraperitoneal injections of acid or alkali extracts of the anterior pituitary of cattle cause in the guinea pig a remarkable hypertrophy and hyperplasia of the thyroid gland associated with liquefaction and absorption of colloid. Martin Silberberg⁴ has studied the combined effect of KI and this extract on the thyroid gland and W. J. Siebert⁵ has determined the effect of various preparations of the anterior pituitary gland on the basal metabolism under various conditions. In our former investigations we used as a criterion of hypertrophy the microscopic changes in the thyroid gland after anterior pituitary injections. The thyroid glands of the injected animals appeared distinctly larger than the normal thyroids.

We sought to determine the changes in weight of the thyroid glands produced by these preparations, in order to obtain quantita-

* These investigations were carried out with the aid of a grant for research in science made to Washington University by the Rockefeller Foundation.

¹ Loeb, Leo, and Bassett, R. B., *PROC. SOC. EXP. BIOL. AND MED.*, 1929, **26**, 860.

² Loeb, Leo, and Bassett, R. B., *PROC. SOC. EXP. BIOL. AND MED.*, 1930, **27**, 490.

³ Loeb, Leo, Bassett, R. B., and Friedman, Hilda, *PROC. SOC. EXP. BIOL. AND MED.*, 1930, **28**, 209.

⁴ Silberberg, Martin, *PROC. SOC. EXP. BIOL. AND MED.*, 1929, **27**, 166; *Krankheitsforschung*, 1930, **8**, 171.

⁵ Siebert, W. J., and Smith, R. S., *Am. J. Physiol.*, 1930, **95**, 396.