spinal cords of the controls isolated granulomas or foci of glia proliferation were detected; in 2 of them small isolated foci of leucocytes were seen along the spinal nerve roots. But in none of them a myelitis was found which could be compared with that described in the last 5 mice, which had been inoculated with the poliomyelitis virus.

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Effect of Injecting Pregnancy-Urine Extracts in Hypophysectomized Rats. I. The Male.*

PHILIP E. SMITH AND SAMUEL L. LEONARD.†

From the Department of Anatomy, College of Physicians and Surgeons, Columbia University.

The injection of pregnancy urine (P.U.) in normal young rats causes an increase of the interstitial cells of the testes, an enlargement of the accessories and occasional injury to the tubules (Engle[1]). Collip *et al.*[2] reported that injections of placental extracts (which he considers physiologically similar to P.U.) in hypophysectomized male rats caused a hypertrophy of the interstitial tissue of the testes, prevented atrophy of the accessories, but *did not* prevent a loss in weight of the testes or degeneration of the tubules. Freud[3] reported that P.U. increased the size of the testes in hypophysectomized rats but gave no structural details.

We have injected several series of hypophysectomized male rats with Antuitrin S (P.U. extract) starting either immediately after hypophysectomy or after a 20-75 day post-operative period. For controls, either one testis was removed before injections were started or littermates were autopsied at that time. Untreated operated littermates were also autopsied at the end of the treatment period.

As evidence for the completeness of the pituitary ablation, we have: (a) daily weighings, (b) skeletal measurements taken at the

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† National Research Fellow, Biological Sciences.

[1] Engle, E. T., *Anat. Rec.*, 1929, **43**, 187.

[2] Collip, J. B., and Selye, H., *Nature*, 1933, **131**, 56.

[3] Freud, J., *Deutsch. Med. Wochn.*, 1932, **58**, 974.

time of hypophysectomy and autopsy, (c) weights of adrenals and thyroids, (d) serial sections of the pituitary capsule. In no animals included in our data were fragments of definitely recognizable A.P. found.

Postponed injections of Antuitrin S in hypophysectomized male rats.

Hypsect.		Treatment begun			Injection		Autopsy	
Age	Wt.	After Hyps. Days	Wt.	L. test	Days	Total R. U.	R. test	Av. tubule area change
101	169	75	137	.139	10	100	.265	+15
43	71	34	81	.063	20	540	.188	+78
69	202	32	166	.252	21	1725	.436	+26
118	321	20	293	.513	27	675	.650	+60

Protocol. Immediate injections. Five littermates, males. Age at beginning of experiment, 111 days, weight, 267 gm.-302 gm. Weight of testes: reference control, 2.61 gm.; untreated hypophysectomized control autopsied 11 days after pituitary ablation, 2.02 gm.; treated hypophysectomized (25 R.U. per day Antuitrin S) for 12 days 3.2 gm., for 14 days, 3.19 gm. With long treatments as shown by other series the testes lose weight but less than untreated animals.

The injection of Antuitrin S has shown striking effects aside from the enlargement of the accessories and the hypertrophy of the interstitial tissue, in fact, the latter was less than we had anticipated from observations on similarly treated normal animals.‡ *There is a definite and pronounced stimulation of the seminiferous tubules. In the postponed injections, the testes approximately doubled their size, an enlargement which is only in part due to the interstitial-tissue hypertrophy. The tubules enlarge. Spermatids and even sperm may be formed even though none were present at the time treatment was instituted. In the injections begun at the time of hypophysectomy, regression in the weight of the testes was profoundly slowed, an enlargement even being found at times. The atrophy of the tubules was slowed and mature sperm continued to be present for a longer period than in untreated hypophysectomized littermates.* Though some tubules seemed to be injured by the P. U., it did have a stimulating effect on many other tubules. These results suggest that a beneficial effect on spermatogenesis might result from P. U. injection in cases of pituitary deficiency.

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