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Effects of Castration Leaving the Epididymis Intact in the Rat.

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Recently Gallagher[1] found that he could stimulate comb growth in capons by the injection of an extract of epididymis just as he could by the injection of a similar testicular extract. Similar extracts of other organs were ineffectual. This would indicate that the epididymis possesses some endocrine activity similar to that of the testis.

I have removed the testes in a series of 11 three-weeks old albino rats, the epididymides being left intact. Ten litter-mates of these rats served as controls. At the age of 80 days, the animals were chloroformed and autopsied. The body weight, nose-anus length, and the weights of the various organs were determined.

These data for the test animals were compared with the corresponding data for the control animals. It was found that the experimental procedure had produced the following effects:

1. Body length was slightly less in the test animals (—0.878±0.328 cm.). This difference may be too little to be considered as significant.
2. Body weight was not affected. (—0.743±8.837 gm.)
3. The weight of the hypophysis was markedly increased. (+4.898±0.266 mg.)
4. The weight of the adrenals was increased. (+5.674±1.348 mg.)
5. The weight of the thymus was slightly, perhaps not significantly, increased. (+0.126±0.044 gm.)
6. The weight of the spleen was unaffected. (—0.021±0.038 gm.)
7. The accessory reproductive organs were distinctly atrophied.
8. The weight of the kidneys was decreased. (—0.377±0.104 gm.)
9. The liver was reduced in weight. (—1.920±0.553 gm.) (No previous report concerning the effect of castration on the weight of liver was found.)
10. The weight of the brain was not changed. (—0.00068±0.090 gm.)

My results are similar to those reported by previous workers who castrated their animals in the ordinary way; provided, that the comparison is made with rats castrated at about the age of 21 days, and in which the body and organ weights were determined at approximately 80 days.

The epididymis, therefore, apparently does not produce an internal secretion capable of maintaining normal size in these organs when the testes are absent.

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[1] Gallagher, *Am. J. Physiol.*, 1928, **87**, 447.