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Late Effects of Pinealectomy in Rats.

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Izawa¹ reviewed the work on pinealectomy and added the results of his own operation on rats. He pinealectomized his animals at 20 days of age and killed them at 85 days. His results showed accelerated growth of the gonads in the male and female, a possible retardation in the growth of the eyeballs in both, and an increase in weight of the hypophysis in the male. No effects on the other endocrine glands were noted. It seemed desirable, in the light of these results, to see whether these effects were permanent in the adult animal or transitory conditions present only during the time of active growth.

Sixteen albino rats, 11 females and 5 males, were pinealectomized at about 26 days of age. A set of litter-mate control rats was subjected to a similar operation but without actual pinealectomy. Non-operated litter-mate controls were also kept. The rats were autopsied about 340 days after operation. Absence of the pineal was confirmed by histological examination of the brain.

The pituitary, thyroid, adrenals, testes, ovaries, epididymides, and eyeballs were examined grossly and weighed. Careful comparison was made with the organs from the control and operated control animals and the results compared with the weights given for the Wistar Standard rats (Donaldson²). No consistent or significant changes were observed. In addition, the adrenals were measured and the relative proportions of cortical and medullary substance determined. Again no change from the normal could be detected.

There is no evidence, therefore, of any major persistent effect on any of the organs examined following removal of the pineal. Although our series was limited, we believe that it was large enough to show any positive results which might have been carried over from Izawa's growing rats to our adult series.

¹ Izawa, Y., *Am. J. Physiol.*, 1926, **77**, 126.

² Donaldson, H. H., *The Rat*, 1924.