

sisted of (a) an unusually high and significant incidence of metastasis to the kidneys in animals affected with the Brown-Pearce tumor and a relatively low incidence of metastasis to the kidneys in all 4 human tumors studied; (b) an unusually low incidence of metastasis to the liver in the Brown-Pearce tumor of the rabbit and a relatively high incidence of metastasis to the liver in carcinoma of the cervix and of the rectum; (c) an unusually high incidence of metastasis to the lung in carcinoma of the prostate and a probable significantly low incidence of metastasis to the lung in carcinoma of the cervix; (d) a relatively high incidence of metastasis to the spleen in carcinoma of the cervix. The seemingly low incidence of metastasis to the spleen from the Brown-Pearce tumor and from carcinoma of the prostate is only suggestive.

Summary. It is demonstrated by an appropriate statistical method that the relative distribution of distant metastases from the Brown-Pearce tumor in the rabbit is unique, and that the relative distributions of distant metastases from certain tumors of man are both constant and characteristic.

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A Pigmented Adenoma of the Intermediate Lobe in a Rat Chronically Treated with Oestrin.

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Chromophobe adenomata of the anterior lobe have repeatedly been observed in rats^{1, 2} and mice^{3, 4, 5} following chronic treatment with oestrogenic preparations. In one of our cases we also noted a small adenoma of the intermediate lobe. We did not feel justified in concluding that this tumor was produced by the oestrin treatment because it occurred only in one case. Yet the fact that tumors in the anterior lobe and the mammary gland, and metaplasia of the uterine epithelium were seen in several animals of this series made

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¹ McEuen, C. S., Selye, H., and Collip, J. B., *Lancet*, 1936, 775.

² Zondek, Bernhard, *Lancet*, 1936, 776.

³ Cramer, W., and Horning, E. S., *Lancet*, 1936, 247.

⁴ Cramer, W., and Horning, E. S., *Lancet*, 1936, 1056.

⁵ Lacassagne, A., and Nyka, W., *C. r. Soc. Biol.*, 1937, **126**, 1112.

it appear worth while to mention this occurrence and to reproduce a microphotograph of the intermediate lobe adenoma.¹

Recently we have observed another similar case in a hooded rat which was fed a crude ether extract of pregnancy urine (from which most of the oestriol had been removed) in doses approximately corresponding to 100-150 International units of oestrin per day, from the 24th to the 880th day of life. Autopsy revealed a large pituitary tumor weighing 84 mg. As it was thought that the tumor was a chromophobe anterior lobe adenoma, which is a frequent occurrence in rats chronically treated with oestrin, and as nothing macroscopically abnormal was noted at autopsy other than the enlargement of the pituitary, only this and the testes were preserved for histo-

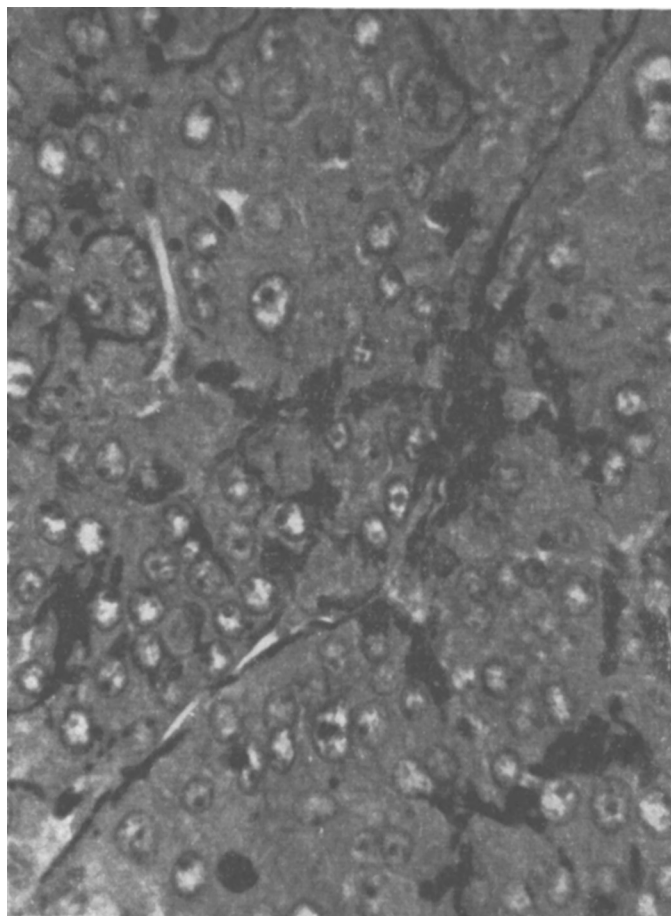


FIG. 1.
Intermediate lobe tumor containing dark pigment granules.

logical examination. It was noted that the testes were unusually large for an oestrin-treated animal, especially if we consider its advanced age. They weighed 3.790 g, and on microscopic examination proved to be normal. The mammary glands were well developed and contained milk cysts. It was also noted that despite its age, the animal was unusually vigorous and well nourished. It weighed 354 g.

Histological examination of the hypophysis showed that most of the enlargement was due to an enormous adenoma of the intermediate lobe. The tumor obviously emerged from the pars intermedia and contained typical melanin granules such as are usually found in the normal intermediate lobe cells of colored rats (Fig. 1).

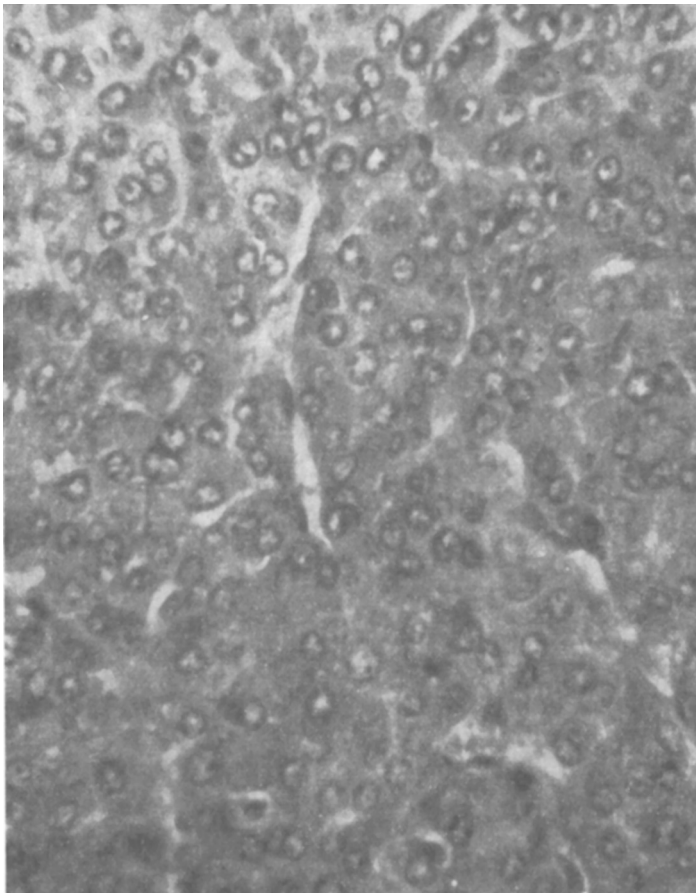


FIG. 2.
Chromophobe adenoma of the anterior lobe.

The cells contained no chromophil granules but were more or less uniformly basophilic and resembled the normal intermediate lobe cells in every respect except that they were considerably larger and somewhat less basophilic than the latter. The anterior lobe of the same hypophysis contained 2 small chromophobe adenomata of the type which is usually produced by prolonged oestrin treatment (Fig. 2).

Intermediate lobe tumors are exceedingly rare; in fact, outside of the small adenoma reported in our previously mentioned communication and the tumor described in this paper, to our knowledge no growth of this type has ever been reported. Among the many pituitaries of rats from our colony, we have never seen intermediate lobe tumors either in untreated animals or in rats belonging to other experimental series. Although we have no proof that the 2 intermediate lobe tumors which we observed are the result of oestrin treatment, we feel that, considering the great rarity of these tumors, they should be reported and emphasis should be laid on the fact that both of them occurred in oestrin-treated animals. It is also noteworthy that in the case here reported, the pituitary showed obvious signs of stimulation by oestrin inasmuch as two independent chromophobe adenomata such as are usually produced by oestrogenic substances were present in the anterior lobe.

Summary. A pigmented adenoma of the intermediate lobe of the hypophysis is described. This is the second time such a tumor has been observed and both cases were seen in rats chronically treated with oestrogenic preparations.

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The Action of Toxic Doses of Atropine on the Central Nervous System.

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Scattered data concerning stimulation and depression of the central nervous system following the administration of atropine are both numerous and contradictory. Albertoni¹ reported that atropine in doses from 2-10 mg per kg increases the electrical excita-

¹ Albertoni, *Arch. Exp. Path. Pharmacol.*, 1882, **15**, 248.