Reviews

PITUITARY CHROMOPHOBE ADENOMAS

Pituitary Chromophobe Adenomas: Neurology, Metabolism, Therapy. By Professor John I. Nurnberger, M.D., and Saul R. Korey, M.D. (Pp. 282; illustrated. 55s.) New York: Springer Publishing Company Inc. London: Lange, Maxwell and Springer. 1953.

On the first page of the introduction the authors rather shock the conventional by suggesting that the original case of Fröhlich, always thought to be due to craniopharyngioma, and the painful adiposity case of Dercum and McCarthy, 1902, were both probably due to chromophobe adenomas, presumably with involvement of the adjacent hypothalamus. This conclusion may be questioned. In the first chapter the authors consider the anatomy of the pituitary and the detailed main paths of the secretion of the anterior pituitary gland directly entering venous channels. They also discuss the influence of the hypothalamus on the anterior pituitary gland and evidence of mediation by humoral means, such as by hypothalamic hormones or metabolites, being conveyed by the blood stream to the anterior pituitary gland. Diagrams showing the amazing variation in the shape of the sella turcica in normal individuals are of value, as it is not infrequent to meet queries, or wrong interpretations, about sella turcicas that do not conform to the usual shape.

Metabolism is discussed along modern lines but with attention to historical landmarks. The authors indicate that a low level of activity of the thyroid gland and of the adrenal cortex persists after complete hypophysectomy. Inactivation of thyrotrophic hormone by the thyroid gland may explain why this hormone may not be found in the blood in thyrotoxicosis by methods that detect an excess in myxoedema. The contrasting effects of pituitary growth hormone and adrenal glucocorticoids on protein metabolism are well brought out, but in considering the mechanisms by which the anterior pituitary causes nitrogen retention the authors mention the production of gonadal testosterone without making clear the importance of adrenal androgens, a contribution which is noteworthy physiologically and pathologically.

The authors give an adequate account of the neurological signs and complications and the metabolic defects that follow destruction of the anterior pituitary gland. Optic atrophy and bilateral hemianopia were frequent, but papilloedema occurred in 7% due to involvement of the third ventricle or to venous compression. Third-nerve involvement was more frequent than fourth or sixth. Large tumours produced a variety of neurological features. Haemorrhage into a cystic tumour was the cause of rapid onset of neurological signs. Detection of hypothalamic compression was made by encephalography, showing distortion of the floor of the third ventricle, and was found to be present in as high as 88% of cases, although in 30% of these there were no referable symptoms. Eighteen of the 68 patients with hypothalamic involvement showed agitation, attacks of drenching perspiration, and occasional hypothermia. A similar number suffered from lethargy, emotional depression, and excessive somnolence. Epileptic phenomena associated with drenching perspiration and peripheral vasodilatation was observed in 6 of the 68 patients with hypothalamic involvement. Obesity with polyphagia occurred only in six.

None of the cases of chromophobe adenoma showed any pigmentation, and this is recorded as being true of another 100 patients observed by German. In contrast with this was the presence of pigmentation in 25% or more of patients with Simmonds's disease and, according to Davidoff, in one-half of the acromegalics. The contrast between patients with chromophobe adenoma and with Simmonds's disease is attributed by the authors to the fact that in Simmonds's disease the posterior pituitary usually remains intact. Apart from this, it should be pointed out that occurrence of pigmentation with Cushing's syndrome and with A.C.T.H. or cortisone therapy has complicated our conception of its origin as a deficiency manifestation. A.C.T.H., or an associated substance, seems to be an important factor in explaining the difference between the frequency of pigmentation in Addison's disease and its relative rarity and mildness in Simmonds's disease.

The chapter on radiography indicates how a chromophobe adenoma may enlarge and invade in all directions, and the frequency and extent of invasion and distortion of the third ventricle and hypothalamus, as shown by pneumo-encephalography, comes as a surprise to the endocrinologist (reviewer). Further information on the radiographic differentiation of craniopharyngioma (for example, the frequency of calcification, particularly in children) would be welcome in a subsequent edition of this book.

The section on pathology is a little disappointing, but this may be innate in the problem. Malignant changes are rare, but cystic degeneration and haemorrhage not infrequent. 10% of the tumours showed transitional eosinophil cells, and clinical evidence of mild acromegaly was traced. Transitional basophil cells are recorded as being very rare. It should also be recognized that a typical Cushing syndrome has been recorded, paradoxically and rarely, with a chromophobe pituitary tumour. In most cases in this present study there was no clue to the origin or cause of the chromophobe adenoma. However, the authors draw attention to the fact that oestrogens can cause chromophobe adenoma in rats, and that this may be associated with dwarfism, atrophy of thyroid and gonads, but enlargement of the adrenal cortex. The latter circumstance would hardly support their hypothesis that the pathogenesis of chromophobe adenoma in man is similar. Surgery, radiography, and medical substitution therapy are also ably discussed.

This book is a very valuable and brief summary of present-day knowledge of pituitary chromophobe adenomas, to which knowledge the authors have made careful and important contributions.

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HYPERTENSIVE DISEASES

Hypertensive Diseases: Cause and Control. By Henry A. Schroeder, M.D., F.A.C.P. (Pp. 610; 164 illustrations and 3 coloured plates. 75s.) London: Henry Kimpton. 1953.

The author of this book and his colleagues at St. Louis have been studying hypertension for a number of years, and the book contains a vast amount of knowledge derived from their own work and that of others. The index of authors contains some 900 names. The book deals exhaustively with the pathology of hypertension, its biochemistry, diagnosis, and treatment; but, as is not unusual in American books, less attention is paid to natural history and morbid anatomy. Nevertheless there is a case report of what must be one of the longest periods of observation of a patient with hypertension yet recorded. This concerns a woman who was found to have a systolic pressure varying from 160 upwards at age 26 and who was followed till her death from a heart attack at age 67.

Dr. Schroeder does not attempt any final definition of hypertension and hypertensive cardiovascular disease beyond the fact of raised blood pressure, but he devotes a good deal of attention to certain special aspects and clinical types. These are nephrogenic, neurogenic, and endocrine hypertension. He does not think that much can be expected from dietetic treatment except in endocrine disturbances, and, though he gives a fair description of sympathectomy and subtotal adrenalectomy, he quotes with approval the fifth of Loeb's rules of therapeutics—"Keep the patient out of the hands of the surgeon." The numerous drugs used in treatment of hypertension, many of them introduced in the last few years, are fully considered. Finally, Dr. Schroeder lays down a schedule for investigation of patients with hypertension and for their treatment with a combination of 1-hydrazinophthalazine ("apresoline") and hexamethonium by mouth. Apresoline is believed to neutralize the hypertensive factors which are derived from the ischaemic kidney. This is therefore a two-pronged attack on the nephrogenic and neurogenic factors in hypertension. Few cases have been treated for longer than two years and it is therefore too early to appraise the results, but striking improvement has been observed in malignant hypertension. The book is well produced, indeed perhaps too expensively for what is essentially a progress report. Nevertheless it is a mine of information about this common disease.

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