S-C-2. Hormonal Functions in Pituitary Chromophobe Adenoma and Craniopharyngioma. A Comparative Study Pre- and Postoperative States

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Forty-six cases of pituitary chromophobe adenoma and 19 cases of craniopharyngioma encountered at our Department since 1959 were examined in endocrinological aspects.

Some of these were admitted to the Second Dept. of Internal Medicine and thoroughly investigated in the functions of gonads, thyroid, adrenals, pituitary-adrenocortical system, glucose metabolism and water balance. Eosinophilic adenoma was excluded from this report because of its small percentage in our series. While the visual field defect improves in most cases after the operation, the endocrinological deficits usually persist or, in some cases, even tend to deteriorate. The disturbances are most evident in gonads. Impairment in water metabolism is less frequently seen, diabetes insipidus occurring in 10 cases and 5 out of them temporarily after the operation. Serum electrolyte balance is only exceptionally disturbed. The reduced reserve capacity of ACTH secretion remains unchanged after the operation (Metopirone test), ACTH secretion against stress is relatively well preserved before and after the operation (insulin stress test), and diurnal variation of plasma 11-OHCS goes out of normal rhythm temporarily after the operation and soon recovers.

These facts suggest that the functional impairment of the hypophysis itself would be permanent but the hypothalamic regulation would be less influenced by the operation and well preserved especially against the stress.

Two cases of pituitary adenoma without significant hormonal disorders were delivered of normal child after the operation. Labor and lactation were very poor. Although some abnormalities were detected in gonads and glucose metabolism after the operation, adrenocortical functions and hypothalamic regulation were within normal limits.