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## Acute Severe Hyponatraemia in a Patient with Right Eye Ptosis

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### INTRODUCTION

Hyponatraemia is a common electrolyte imbalance in oncology. Syndrome of inappropriate anti-diuretic hormone secretion (SIADH) contributes to approximately 30% of cases. However, it remains a diagnosis of exclusion. In oncology, other possible contributing causes include reduced sodium intake, gastrointestinal and renal losses, chemotherapy and radiotherapy. However, for hyponatraemia in head and neck tumours, pituitary or hypothalamic involvement needs to be ruled out. We report a case of severe hyponatraemia and complex ophthalmoplegia in a patient with nasopharyngeal carcinoma (NPC) as a presentation of pituitary extension.

The clinical records of a patient who was diagnosed with NPC were reviewed.

### CASE

A 43-year-old gentleman presented with double vision, headache and weight loss for 2 months. It was associated with right third and sixth cranial nerve palsies, as well as left submandibular lymphadenopathy. Computerized tomography scan and lymph node biopsy confirmed the diagnosis of nasopharyngeal carcinoma. Prior to commencement of chemotherapy, he also presented with acute severe hyponatraemia which was resistant to supportive treatment. Urine osmolality and serum osmolality pointed toward SIADH, but the patient was not responsive to fluid restriction and hypertonic saline correction. Pituitary gland function tests and magnetic resonance imaging subsequently confirmed pituitary extension of the NPC causing central hypocortisolaemia with concomitant SIADH. Hyponatraemia was successfully treated with oral hydrocortisone and oral sodium chloride.

### CONCLUSION

This case study illustrates important presentations of NPC progression. Complex ophthalmoplegia and hyponatraemia are both warning signs of intracranial NPC extension.

# PP-54

## A Rare Case of Double Adrenocorticotropic Hormone-Secreting Pituitary Adenoma

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### INTRODUCTION

When distinct pituitary hypersecretory manifestations coexist, the differential diagnoses include plurihormonal or multiple pituitary adenomas. We describe a rare case of Cushing's disease and central diabetes insipidus caused by two non-contiguous pituitary adenomas, one located within the anterior pituitary and the other in the infundibulum.

### CASE

A 14-year-old female presented with unexplained weight gain, central obesity, hirsutism, polyuria and polydipsia. Hormonal studies indicated Cushing's disease, and magnetic resonance imaging showed a small focal area of delayed enhancement in the right pituitary gland. While other anterior pituitary hormonal tests were negative, osmolality and water deprivation test confirmed central diabetes insipidus. Endoscopic transsphenoidal surgery revealed 2 lesions containing cheesy-like material at the posterior part of the anterior pituitary and another compressing the infundibulum. The 2 clearly separated pituitary adenomas identified in the same gland were completely resected. Immunohistochemistry and pathology revealed that the double adenomas were positive for adrenocorticotropic hormone (ACTH), thyroid stimulating hormone, growth hormone, luteinising hormone, prolactin and follicle stimulating hormone. Postoperatively, the levels of ACTH and cortisol decreased rapidly. However, she developed panhypopituitarism with persistent diabetes insipidus, requiring hormonal replacement therapy.

Multiple pituitary adenomas (MPA) are defined as 2 or more immunocytochemically and/or morphologically distinct tumours that are detected in only 0.37 to 2.6% of surgical specimens and in 1.6 to 3.3% of Cushing's disease patients. Our patient is the youngest reported patient to our knowledge so far and is considerably rare, due to the presence of a second pituitary adenoma in the same gland detected only intraoperatively and not radiologically, isolated ACTH-secreting tumours, and clinical presentation of diabetes insipidus.