

# Primary thirst defect is a rare but important complication following surgery for hypothalamic hamartoma and intractable epilepsy

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## Introduction

- Diabetes insipidus(DI) is a well-recognized post neuro surgical complication arising after hypothalamic-pituitary surgery.
- DI occurring in the post-operative period can be transient happening within 24-48 hours of surgery, secondary to trauma to the connections between the magnocellular bodies and the nerve terminals in the posterior pituitary, or to axonal shock from disturbances in the vascular supply to the pituitary stalk and posterior pituitary.
- We report primary thirst defect, a previously unreported rare complication following surgery for hypothalamic hamartoma in an adolescent girl.

## Case

- Eighteen-year-old girl with intractable epilepsy, secondary to hypothalamic hamartoma was admitted for the resection of her hypothalamic lesion
- She developed hypernatremia with hyper-osmolality but without thirst or polyuria 24 hours after surgery.
- She had normal plasma cortisol reserve (plasma cortisol:679nmol/l), thyroid and renal function tests.

## Investigations

### Hypertonic saline test

Time(hours)	15:57	16:11	16:29	17:30	18:00
Plasma Osmolality (mosm/kg)	306	305	307	311	312
Plasma sodium (mmol/l)	148	149	150	151	152
Urine Osmolality (mosm/kg)	Unable to obtain	Unable to obtain	Unable to obtain	614	643
Plasma AVP (pmol/l)	0.9	0.9	1.6	32.6	38.7
Thirst (visual analogue scale 1-10)	0	0	2	7	9

Targeted fluid intake of 2.6litres/day after appropriate rehydration subsequently led to the improvement of plasma osmolality(298mosmol/kg) and normalisation of plasma sodium(144mmol/l)

## Conclusion

- Primary thirst defect, is a rare and dangerous complication that can occur after epilepsy surgery for hypothalamic hamartoma.
- This can cause a confusing picture with diabetes insipidus and vigilance is required to identify and recognise the problem early to initiate the most appropriate management.