

Neuropsychiatric aspects in a rare case of hypothalamic obesity



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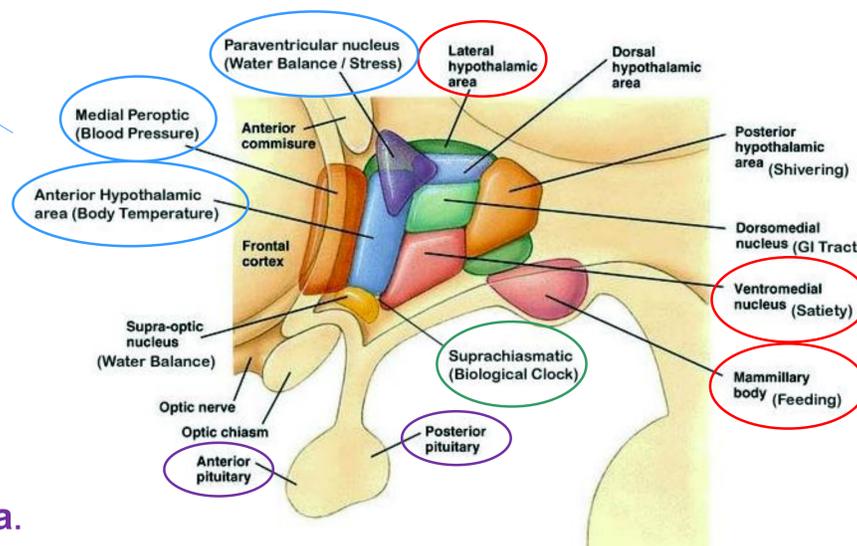
Case report: A 22-year-old woman presented with **weight gain** (class I obesity), **oligomenorrhoea**, **impaired vision** and **altered concentration**. MRI diagnostic revealed a suprasellar tumor (35 x 25 x 20 mm). With suspected craniopharyngeoma she was treated with **transcranial surgery**; in fact a **suprasellar haemangioma** could be removed partially. Only **five cases of cavernous malformations** of the hypothalamus have been described in literature so far.¹

The patient suffered from **tachycardia**, **anhidrosis** and an **alteration in temperature regulation** with basal temperature between 38,0 -38,3 C and rise up to 40 C during light exercise.

Suppression of sympathetic nervous system

She revealed complete **pituitary deficiency** with concomitant **hyperprolactinemia** and **secondary amenorrhoea**.

Overactive vagal neurotransmission



She revealed distinct **hyperinsulinemia** and developed **type II diabetes mellitus**.

She still presented with **alteration in appetite** with hyperphagia and **excessive weight gain** up to **class III obesity**.

The patient suffered from **alteration in sleep-wake cycle** with increased **daytime sleepiness**.

➔ Neuropsychological functioning indicated **affective disorder** with **loss of motivation**, **alteration in cognition, learning and memory** processes.

- Increased prevalence of affective and social dysfunctions in patients treated for childhood craniopharyngeoma.²
- Association of neuropsychiatric aspects with degree of damage to frontal lobe due to tumour size, localization and transcranial surgery.³

➔ **Therapy approach?**

- Treatment with **somatostatin analog** (Octreotide 15 µg/kg/d for six months) can reduce hyperinsulinemia, decrease caloric intake and improve quality of life.⁴
- **Melatonin** treatment (6 mg/d) improves daytime sleepiness and increases activity.⁵

Literature:

- ¹ Liu et al. *Cavernous malformations of the optic pathway and hypothalamus: analysis of 65 cases in the literature*, 2010
- ² Zada et al. *Prevalence of Neurobehavioural, Social and Emotional Dysfunction in Patients Treated for Childhood Craniopharyngeoma: A Systematic Literature Review*, 2013
- ³ Bawden et al. *Neuropsychological functioning following craniopharyngeoma removal*, 2009
- ⁴ Lustig et al. *Octreotide therapy of pediatric hypothalamic obesity: a double-blind, placebo-controlled trial*, 2003
- ⁵ Müller et al. *Melatonin treatment in obese children with childhood craniopharyngeoma and increased daytime sleepiness*, 2006