Novel Uses of Psychiatric Drugs to Treat Hypothalamic Obesity

MC. Azcona, F.J. Aguilar, J.L. León, A. Ochotorena, A. Navedo, A. Catalán, P. Sierrasesúmaga, M. Prados, E. Arnaus.

Endocrinology Unit. Dpt. of Paediatrics. Faculty of Medicine. Clínica Universidad de Navarra. Pamplona and Madrid. Spain.

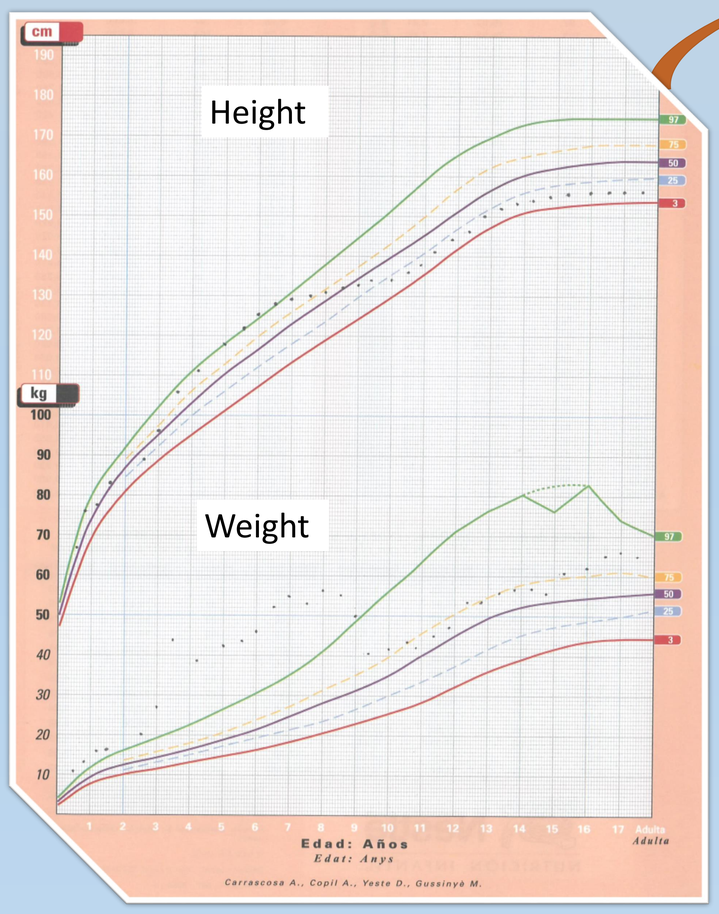
Introduction and Objectives

- **Hypothalamic Obesity (HO):** secondary to hypothalamic damage. Multifactorial etiology: tumors, syndromes, infections…
- **Main Clinical Features:**
  - Hyperphagia and loss of satiety feeling.
  - No response to dietetic measures, medical therapy or even surgery.
  - Treatment: personalised due to its wide etiology. Hypotalamic damage makes difficult the response to conventional medical therapies.
- **Objectives:**
  - To describe the natural history of the disease in patients who attended to our centre from childhood to adolescence.
  - To find new uses of psychiatric drugs that might shed new light in the treatment of HO.

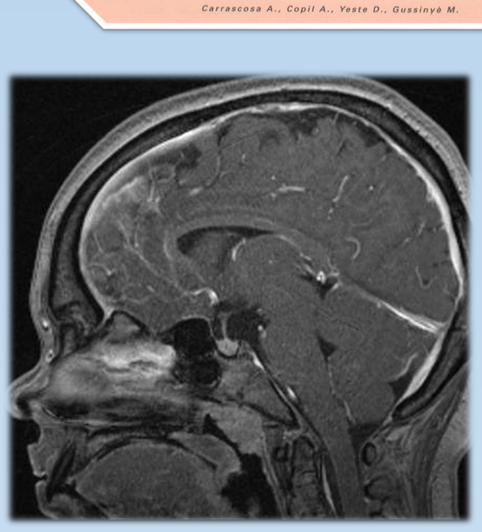
Methods

- Medical records review: 10 patients diagnosed with HO and treated by a multidisciplinary team at the paediatric Endocrinology Unit, from January 1990 to December 2015.
- Data collected: anthropometry weight (kg), height (cm) and BMI (Kg/m^2), clinical data and treatment received to manage weight gain.
- Anthropometric reference data: Carrascosa et al, 2008.
- Some drugs required compasive use, and were approved by the Hospital Ethics Committee and Ministry of Health.

Results



	Pilocytic Astrocytoma	Pilocytic Astrocytoma	Neonatal Meningitis	Hypothalamic Neurocytoma	Anaplastic fibrillary Astrocytoma	Craneofaringioma	Prader-Willy (n=4)
Age/sex at diagnosis	12.5 / M	12 / M	1.5 / F	2.9 / F	12 / F	12 / F	6.4 / 1M , 3F
Weight-SDS at diagnosis	-0.2	+3,1	+3.5	+7.1	-1.6	-0.48	+5.8
Weight-SDS after treatment	+0.1	+3	+8.7	+7.1	-0.3	+1.9	+4
BMI-SDS before HO therapy	+1.1	+4.19	+5.7	+6.4	-1.3	-0.19	+6.4
BMI-SDS after HO therapy	+1.8	+5	+9.7	+8.2	+0.3	+2.5	2.9
BMI gain	12	48	33	12	11	14	18
BMI decrease	No	2	6.5	2.8	No	0.6	2.5
Hormonal therapy	Hydrocortisone L-thyroxine GH Desmopressin	Hydrocortisone L-thyroxine Desmopressin	L-thyroxine Desmopressin	Hydrocortisone L-thyroxine GH Desmopressin	None	Hydrocortisone L-thyroxine GH Desmopressin	GH Estrogens
Other therapies	Dextroamphetamine Sibutramine Surgery	Methylphenidate Surgery	Metylphenidate Topiramate Antiibioics	Dextroamphetamine Surgery	Methylphenidate RT, QT Surgery	Melatonine Surgery, RT	Risperidone Sertraline Bariatric Surgery



Conclusions

- Patients with HO gain weight rapidly one year after diagnosis or tumor therapy.
- HO should be assessed and treated early at the diagnosis.
- Some psychiatric drugs such as mehtylphenidate and dextroamphetamine might be useful and improve quality of life.

Bibliography

1. Bereket a, Kiess W, Lustig RH, Muller HL, Goldstone a P, Weiss R, et al. Hypothalamic obesity in children. Obes Rev. 2012 Sep;13(9):780–98.

2. Kim JH, Choi J-H. Pathophysiology and clinical characteristics of hypothalamic obesity in children and adolescents. Ann Pediatr Endocrinol Metab. 2013;18(4):161–7.

DOI: 10.3252/pso.eu.55ESPE.2016