

4CPS-072

ATC A08- ANTI OBESITY

SETMELANOTIDE IN MONOGENIC OBESITY: A CASE REPORT

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BACKGROUND AND IMPORTANCE

- The melanocortin 4 receptor (MC4R), component of the leptin-melanocortin pathway, plays a part in body weight regulation (hunger, satiety and energy expenditure).
- Setmelanotide** is a **highly potent MC4R-agonist** that leads to weight loss in **Monogenic Obesity** (MO) individuals with complete pro-opiomelanocortin (POMC) deficiency or leptin receptor (LEPR) deficiency.

AIM AND OBJECTIVES

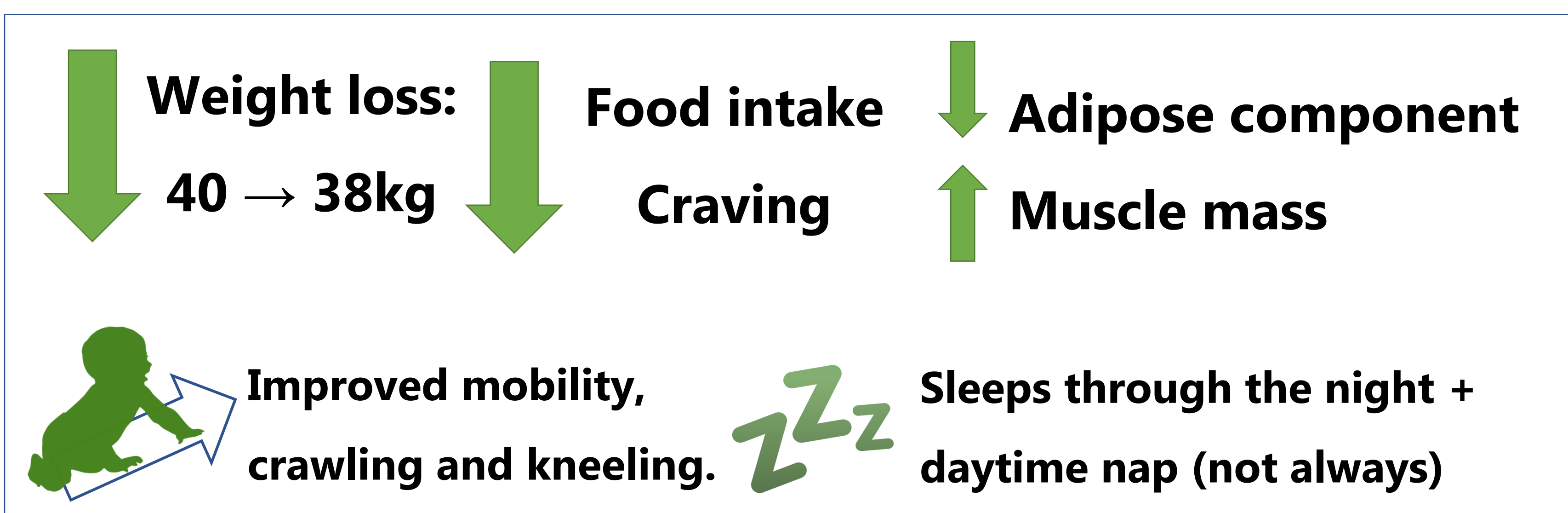
- To evaluate the efficacy of Setmelanotide in a 3-year-old pediatric patient with MO due to LEPR deficiency (**off-label use**).

MATERIAL AND METHODS

- Observational, retrospective and descriptive study of a child with MO in a third-tier hospital for 6 months (April-September 2023).
- The information was obtained from the Electronic Clinical History and the Pharmacy Service Managing Software.

RESULTS

- The child born at 36+2 weeks with a weight appropriate to his gestational age (2,5 kg).
- He was admitted in an obesity's study in may 2021. He was diagnosed with MO due to LEPR deficiency in September 2021.
- The child started with Setmelanotide 0,5mg in April 2023 and was increased to a current dose of 1,5mg daily subcutaneous injection.



Analytical levels	October 2022	May 2023
Triglycerides (mg/dL)	99	75
Cholesterol (mg/dL)	217	139
LDL (mg/dL)	144	72

- There are no alternative treatments suitable for the patient's age.
- Setmelanotide has demonstrated statistically significant weight loss with at least a 5% decrease in body weight after 6 months and decreased appetite, therefore it could reach a 10% after 1 year.
- The child has skin rash and skin hyperpigmentation (activity at melanocortin 1-receptors -MC1R-) as adverse effects.

CONCLUSION AND RELEVANCE

- Setmelanotide is the first European Medicines Agency approved medication for the treatment of POMC and LEPR deficiency in patients (children from 6 years old and adults) with MO.
- In our case report is an off-label use and **the child has been treated efficiently** with Setmelanotide for 6 months with a reduction in weight, hunger and analytical parameters,
- We should evaluate the response after one-year with Setmelanotide to confirm that the treatment objectives are achieved (10% weight loss in one year).

