

Exploring Current Pharmacological Treatments for Genetic Obesity with Setmelanotide in Focus: A Narrative Review

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ABSTRACT

Genetics play a crucial role in early childhood obesity which is a multifactorial disease that is highly prevalent and poses a significant challenge to public health.

Objective: The objective of this review was to evaluate and summarize the research on the efficacy and limitations of setmelanotide for the treatment of pediatric obesity of genetic factors.

Methodology: Electronic databases were explored with Boolean operator mixed keywords like pediatric obesity, genetic obesity, pharmacotherapy, and setmelanotide. The main focus was on setmelanotide approaches on pediatric studies published in English from 2018 to 2023.

Results: Setmelanotide a melanocortin-4 receptor, is an approved treatment and well tolerated among pediatric patients aged ≥ 6 years and shown to be effective in at least 10% reduction in body weight within a year of treatment. This review comprises a narrative review on setmelanotide and a tabular summary of the current available evidence for the management of pediatric obesity in terms of medical options.

Conclusion: Research into adult obesity has established pharmacological novel therapies, which have been approved and established in clinical practice; however, the research and implementation of such therapies in pediatric populations have been lagging behind. Further research is justified, to address the huge treatment gap in severe pediatric obesity.

Keywords: Pediatric obesity, Pharmacotherapy, off label medications, genetic obesity, setmelanotide, endocrinology, pediatrics, pharmacotherapy

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