

Case Study: Childhood Obesity Resulting from Erroneous Parental Beliefs and Influence of Grandmother in Decision Making

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Abstract

This case study presents a 12-year-old male child, suffering from morbid obesity (169 kg, BMI 59.88) due to hyperphagia and sedentary lifestyle. Born premature and admitted to NICU for 8 months, Abdulla developed hyperphagia post first year of life. Despite efforts by parents and patient to address the weight issue, the grandmother's belief that weight loss will be fatal hinders progress. Abdulla presents with comorbidities like vitamin D deficiency, insulin-resistant diabetes, obstructive sleep apnea, asthma, and fatty liver. This case underscores the critical influence of family dynamics on childhood obesity management.

Keywords: Childhood obesity, Hyperphagia, Family dynamics, Erroneous beliefs, Multidisciplinary approach.

Introduction

Obesity is the excessive accumulation of body fat that harms the health of individuals affected by this condition. (1) It is typically a result of consuming too many calories without balancing it out with enough physical activity, leading to a surplus of energy. (2) Various factors like genetics, behavior, and environment can influence the likelihood of developing obesity. (3) Worldwide, millions of young children under five years old are affected by being overweight or obese. (4) The prevalence of obesity among teenagers has been steadily rising globally, with a 4.9% increase in girls and a 6.9% increase in boys from 1975 to 2016. (5)

Childhood obesity is a complex public health concern influenced by genetic, environmental, and behavioral factors. This case study highlights the impact of parental beliefs and family dynamics on a child's health, focusing on the challenges faced in managing childhood obesity in a 12-year-old male patient.

Case Presentation

A male 12-year-old male, presents with morbid obesity (169 kg, BMI 59.88) stemming from hyperphagia and sedentary habits. His history includes a preterm birth and an extended NICU stay. Despite progressive weight gain and failed diet attempts, he and his parents are committed to addressing his weight issues. However, the presence of his grandmother, who believes weight loss will be fatal, poses a significant challenge. She undermines weight management efforts by tempting him with sweets when parents are not around.

Investigations

His clinical examination reveals comorbid conditions such as vitamin D deficiency, insulin-resistant diabetes, obstructive sleep apnea, asthma, and fatty liver. Laboratory investigations indicate abnormal lipid profiles, high fasting insulin levels, elevated HbA1c, and abnormal glucose tolerance test results. Spirometry shows features of mixed obstructive and restrictive lung disease. Abdominal ultrasound confirms fatty liver. Genetic testing is recommended but delayed due to financial constraints.

Diagnosis

1. Morbid obesity (BMI 59.88)
2. Vitamin D deficiency
3. Insulin-resistant diabetes
4. Obstructive sleep apnea
5. Acute intermittent bronchial asthma
6. Mixed obstructive and restrictive lung disease
7. Fatty liver

Treatment and Outcome

The patient is currently awaiting a gastric sleeve operation to address his morbid obesity. However, the challenge lies in addressing the erroneous beliefs held by the grandmother, which impede effective weight management strategies. Involvement of a multidisciplinary team, including psychologists and nutritionists, may help reframe the grandmother's beliefs and enhance the family's understanding of the risks associated with obesity.

Discussion

Childhood obesity is believed to heighten the likelihood of developing various accompanying health conditions, such as hypertension, diabetes, early puberty, menstrual irregularities, fatty liver disease, ovarian syndrome, sleep apnea, asthma, musculoskeletal issues, and mental health disorders. Given this information, the increasing prevalence of obesity worldwide poses a significant health challenge that requires a well-thought-out strategy to combat the effects of childhood obesity on future generations. This study seeks to offer a thorough examination of childhood obesity, covering the factors that contribute to its development, potential health implications, prevention strategies, and current treatment approaches.

Numerous outcomes of obesity, once believed to primarily impact adults, are now being observed in children. Childhood obesity can result in a range of immediate and lasting health issues, including cardiovascular, respiratory, orthopedic, endocrine, mental health, and gastrointestinal/liver conditions.

Many of the health problems traditionally associated with adults as a result of obesity are increasingly affecting children. Childhood obesity can lead to a variety of short-term and long-term health issues, encompassing cardiovascular, respiratory, orthopedic, endocrine, mental health, and gastrointestinal/liver conditions.

Both the public sector (governments) and private sector (food industries) bear responsibility for creating an environment that discourages obesity. This entails implementing transparent protocols and well-designed national initiatives to decrease the availability of highly processed foods in the food supply chain. Preventive measures could include prohibiting the sale of high-calorie beverages and snacks in schools, restricting the availability of unhealthy products near schools, offering affordable nutritious options at schools and clubs, imposing taxes on unhealthy foods to curb their consumption and distribution, as well as promoting student engagement in diverse physical activities by providing playgrounds and gym facilities.

Childhood obesity is a multifactorial condition requiring a comprehensive approach involving lifestyle modifications, dietary changes, and physical activity. In the current case, the impact of erroneous parental beliefs, particularly perpetuated by the grandmother, underscores the need for effective communication and education within the family unit. Addressing misconceptions about weight loss and its implications is crucial in promoting a supportive environment for the child's health.

Parents play a crucial role in helping their children make healthy choices, ensuring they eat at the right times and consume the correct proportions of food for improved health and nutritional well-being.

Physical activity levels in children have a direct impact on the risk of obesity. It is advised that children up to 15 years engage in at least 60 minutes of moderate to vigorous exercise daily to help mitigate the risk of obesity. Simply promoting physical activity is not sufficient; it should be coupled with reducing screen time and a sedentary lifestyle.

The amount of time spent on screens is linked to the development of obesity, with various media devices playing distinct roles in increasing the risk of obesity. Restricting screen time is seen as a beneficial measure to combat childhood obesity, with a recommendation that screen time should be limited to no more than 2 hours per day. Additionally, it is important to recognize the influence of social media on the eating habits of younger individuals, especially those attempting weight loss or grappling with obesity.

Conclusion

This case study emphasizes the intricate interplay between family dynamics and childhood obesity management. Effective interventions for pediatric obesity require not only medical interventions but also addressing societal beliefs and family influences that may impede progress. Collaborative efforts involving healthcare providers and family members are essential in promoting positive outcomes for children struggling with obesity.

Conflict of Interest

The authors have indicated they have no potential conflicts of interest to disclose.

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