

Challenges of Treating Feeding Disorders in Infants and Young Children

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Abstract

There is a reliable association between autism and Feeding and Eating Disorders. Concerningly, where these two conditions co-occur, clinical outcomes of Feeding and Eating Disorders are significantly worse, and treatment less effective, than when the Feeding and Eating Disorders occur in neurotypical individuals. Problematically, the reason for the association between autism and Feeding and Eating Disorders is poorly understood, which constrains advances in clinical care. This paper outlines several possible mechanisms that may underlie the observed association and suggests ways in which they may be empirically tested. Mechanisms are split into those producing an artefactual association, and those reflecting a genuine link between conditions.

Keywords: Behavioral Intervention; Evidence-Based Treatment; Feeding Disorders; Interdisciplinary

Introduction

Artefactual associations may be due to conceptual overlap in both diagnostic criteria and measurement, Feeding and Eating Disorders causing transient autistic traits, or the association being non-specific in nature. A genuine association between autism and Feeding and Eating Disorders may be due to common causal factors, autism directly or indirectly causing Feeding and Eating Disorders, and Feeding and Eating Disorders being a female manifestation of autism. Feeding and eating disorders (FEDs) are heterogenous and characterized by varying patterns of dysregulated eating and weight. Genome-wide association studies (GWASs) are clarifying their underlying biology and their genetic relationship to other psychiatric and metabolic/anthropometric traits.

Discussion

Genetic research on anorexia nervosa (AN) has identified eight significant loci and uncovered genetic correlations implicating both psychiatric and metabolic/anthropometric risk factors. Careful explication of these metabolic contributors may be key to developing effective and enduring treatments for devastating, life-altering, and frequently lethal illnesses. We discuss clinical phenomenology, genomics, phenomics, intestinal microbiota, and functional genomics and propose a path that translates variants to genes, genes to pathways, and pathways to metabolic outcomes to advance the science and eventually treatment of FEDs. The term “feeding disorder” is used when young children are unable or unwilling to eat enough to maintain their nutritional needs. Evaluation and treatment are best accomplished using a multidisciplinary approach, with physicians, dietitians, feeding specialists, psychologists and social workers. Together, this team can assess for underlying medical comorbidity, nutritional status and nutrient deficits, feeding skill development and safety with oral feeds, and the caregiver and patient interactions that contribute to the disorder. Other psychosocial needs should be accounted for when creating the feeding plan, to ensure success across feeding environments. In this article, we discuss definitions of pediatric feeding disorders, recommended evaluation, and treatment modalities across disciplines. Avoidant/restrictive food intake disorder (ARFID) is diagnosed when food avoidance leads to clinically significant nutritional, weight/growth, or psychosocial impairment. As many as 81.5% of children and adolescents diagnosed with ARFID have a history of a medical condition associated with pain, fatigue, or malaise. ARFID is diagnosed and treatment begins after the medical condition

is resolved but food avoidance remains. Effective treatment involves repeated exposure to eating food and related stimuli aimed at creating inhibitory learning to counteract learned fears and aversions. Treatment usually involves positive reinforcement of food approach behavior and escape extinction/response prevention to eliminate food avoidant behavior. To shed light on the neural mechanisms that may maintain ARFID and to identify candidate pharmacological treatments for adjuncts to behavioral interventions, this paper systematically reviews research on drug treatments that successfully reduce conditioned taste aversions (CTA) in animal models by disrupting reconsolidation or promoting extinction. The mechanism of action of these treatments, brain areas involved, and whether these CTA findings have been used to understand human eating behavior are assessed. Collectively, the results provide insight into possible neural mechanisms associated with resuming oral intake following CTA akin to the therapeutic goals of ARFID treatment and suggest that CTA animal models hold promise to facilitate the development of interventions to prevent feeding problems. The findings also reveal the need to investigate CTA reduction in juvenile and female animals and show that CTA is rarely studied to understand disordered human feeding even though CTA has been observed in humans and parallels many of the characteristics of rodent CTA [1-4].

An important developmental process in the first years of life is the acquisition of autonomous internal regulation of feeding. A model of 3 stages of feeding development is presented to provide an understanding of how children develop internal versus external regulation of eating. This model is used to understand how different feeding disorders develop at these 3 stages of feeding development, and how some feeding disorders can occur at any age of the child. Current research is examined addressing the challenges of treating feeding disorders in infants and young children. Feeding disorders are a broad category of conditions characterized by persistent difficulties in eating or

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feeding, which can significantly impact an individual's physical health, psychological well-being, and overall development. These disorders often manifest in infancy or early childhood but can also persist into adulthood. Common types of feeding disorders include Avoidant/Restrictive Food Intake Disorder (ARFID), dysphagia (difficulty swallowing), and Pica (eating non-nutritive substances). The etiology of feeding disorders is multifactorial, involving a complex interplay of genetic, biological, environmental, and psychological factors. These disorders may arise from medical conditions such as gastrointestinal issues, neurological disorders, or congenital anomalies. Additionally, sensory sensitivities, learned behaviors, and adverse feeding experiences can contribute to the development of feeding difficulties. Diagnosis of feeding disorders involves a comprehensive assessment that includes medical history, nutritional evaluation, behavioral observations, and, when necessary, specialized tests. Early identification and intervention are crucial to prevent potential complications, including malnutrition, growth failure, and psychological distress. Treatment approaches are multidisciplinary, often requiring the collaboration of healthcare professionals such as pediatricians, dietitians, speech-language pathologists, occupational therapists, and psychologists. Interventions may include nutritional rehabilitation, behavioral therapy, and addressing underlying medical conditions. Family involvement is essential to support the child's feeding practices and promote positive mealtime experiences [5,6].

Despite the challenges associated with feeding disorders, many individuals can achieve significant improvements in their feeding behaviors and nutritional status with appropriate treatment. Continued research is needed to better understand the underlying mechanisms of these disorders and to develop more effective, individualized treatment strategies. Feeding disorders encompass a range of conditions characterized by persistent challenges in eating or feeding that can adversely affect an individual's health, growth, and overall quality of life. These disorders can emerge at any age but are most commonly

diagnosed in infancy and early childhood. They are distinguished from typical picky eating by their severity and the extent to which they disrupt normal functioning. The prevalence of feeding disorders is notably high in pediatric populations, particularly among children with developmental disabilities or chronic health conditions.

Conclusion

Additionally, psychological components, including anxiety and past traumatic feeding experiences, can play a crucial role in the development and maintenance of these disorders. Understanding feeding disorders requires a comprehensive approach that considers the diverse factors contributing to their onset and progression. Early diagnosis and intervention are critical to mitigating the potential long-term effects of feeding disorders. Treatment typically involves a multidisciplinary approach, combining medical, nutritional, behavioral, and psychological therapies to address the unique needs of each individual.

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