



CASE REPORT

Avoidant/Restrictive Food Intake Disorder: Inpatient Management with a Multidisciplinary Treatment Approach

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ABSTRACT

We present two cases of avoidant/restrictive food intake disorder, a diagnosis newly presented in the Diagnostic and Statistical Manual-5 (DSM-5). This paper focuses solely on the inpatient management of two patients who responded favorably to a combination of cognitive behavioral therapy, pharmacotherapy with mirtazapine and cyproheptadine, and enteral feeding. It presents a promising potential inpatient treatment regimen with positive patient outcomes noted in these two patients.

INTRODUCTION

Although avoidant/restrictive food intake disorder (ARFID) is frequently encountered in medicine, healthcare providers' awareness of ARFID is low.^{1,2,3} It is a new diagnosis presented in the DSM-5. ARFID was added to describe the growing population of patients with weight loss who do not fit the criteria for other eating disorders. Per the DSM-5, the diagnosis requires a failure to meet nutritional needs and decreased oral food intake resulting in one of the following—low weight, nutritional deficiencies, dependence on supplemental or enteral feeds, or psychosocial impairment, in the absence of a better explanation by another medical condition or other mental disorders or lack of availability of food.⁴ ARFID is distinct from other eating disorders (ED), such as anorexia nervosa (AN) and bulimia nervosa (BN), in that it does not exhibit body image distortion, and individuals usually do not have a fear of weight gain. Additionally, ARFID is a heterogenous diagnosis where three distinct subtypes have been described in the literature—limited food intake due to fear of aversive consequences from eating, food-related sensory hyperreactivity, and those with a loss or a lack of appetite.⁵ A 2022 Canadian study further supports these subtypes using Latent Class Analysis (LCA) to determine the frequency of subclasses found in patients with ARFID. Findings support a 3-class model: acute medical (AM), which corresponds to the previously mentioned fear of aversive consequences subtype, lack of appetite (LOA), and sensory (S). There was a 52% probability of being

classified as AM, 40.7% for LOA, and 6.9% for S. Individuals in the AM group were found to have more significant weight loss, higher rates of hospitalization, a shorter duration of symptoms, and symptoms were usually noted after a traumatic food-related event (choking, pain, gagging, etc.), leading to restricted food intake. More impairment in growth parameters and more significant failure to gain weight were noted in the LOA class. Additionally, the LOA and AM classes showed overlapping characteristics. The S class avoided foods based on the sensory characteristics of the foods.⁶ Awareness of the different presentations of ARFID and motivators that restrict food intake will help guide the treatment plan and management, plus future studies to determine the best management for patients with ARFID.

Ornstein et al. found that when categorizing patients presenting for evaluation of suspected ED to adolescent physicians, 14% fit the criteria for ARFID.⁷ Thus, ARFID represents a significant proportion of ED patients. Due to medical issues related to poor nutrition in ARFID, over 55% report a comorbid medical condition, 19% report gastrointestinal (GI) symptoms, 13% vomiting/choking, and 4% food allergies⁸; as well as a lack of inpatient psychiatric capabilities. General pediatricians often admit these patients. However, the need for more empirical data about the management of ARFID poses management challenges to pediatricians.⁹

CASE PRESENTATION

Case 1: A 10-year-old male with a history of constipation, anxiety, and abdominal pain was admitted for failure to thrive. Height was 1.42m (44%, $Z=-0.15$), weight was 25kg (1%, $Z=-2.27$), and BMI was 12.6 kg/m² (<0.01%, $Z = -3.73$). Labs showed no nutritional deficiencies. Pediatric GI, Pediatric Nutrition, and Child and Adolescent Psychiatry were consulted, and he was started on a diet plan of three high-calorie meals daily with a supplemental nutritional drink encouraged three times a day. The medical GI workup was unrevealing. Psychiatry diagnosed him with generalized anxiety disorder (GAD), and mirtazapine was prescribed as an off-label treatment for anxiety with appetite-stimulating properties. After several days of attempting oral nutrition, he continued to lose weight, and calorie counts revealed he was taking 40% of the lower end of estimated needs. He reported that he could not take the oral nutritional supplement due to worry “about pain and getting sick.” He was subsequently diagnosed with ARFID by Child and Adolescent Psychiatry based on the DSM-5 criteria of food avoidance due to worry about “pain” and “getting sick” after eating, persistent failure to gain weight and faltering growth, and lack of worry about body image or distortion of body image, which also excluded AN and BN. He was able to eat briefly during cognitive behavioral therapy (CBT) sessions but refused to eat afterward. On hospital day seven, a nasojejunal (NJ) tube was placed for continuous feeds overnight, following which weight gain was noted. However, due to a patient and family request, the tube was removed after two days, and he was started on a trial of oral feeds with the requirement to add the oral nutritional supplement after each meal if he did not consume adequate calories. He had increased anxiety after the institution of this “catch-up protocol,” resulting in elopement from the hospital. When he was brought back, this method was abandoned in favor of further CBT, and cyproheptadine was added to stimulate appetite. Olanzapine, an atypical antipsychotic, was offered to further increase appetite by capitalizing on its side effect of increased appetite, but the patient’s family declined. He gained a total of 1.4 kg in 2 weeks.

Case 2: A 12-year-old female with no past medical diagnoses presented with two months of weight loss and refusal to eat. She had previous anxiety symptoms and influenza A infection two months prior with significant associated GI distress. On admission, she weighed 29.6 kg (2%, $Z -2.04$), had a height of 1.53m (54%, $Z = 0.09$), and had a BMI of 12.7 kg/m² (<1%, $Z=-3.51$). A calorie count showed that the patient met 26% of the lower end of estimated calorie needs. An oral supplementation plan was instituted with a nutritional oral supplemental drink. However, due to several days of continued weight loss, the decision was made for NJ tube placement, with resultant weight gain noted. She was subsequently diagnosed with ARFID by Child and Adolescent Psychiatry due to inadequate food intake needed to maintain nutritional needs (due to fear of adverse GI consequences from eating), significant weight loss and faltering growth, and absence of problems with body image or body distortion, making AN or BN less likely. She was started on mirtazapine and cyproheptadine for appetite stimulation. With CBT, enteral feeding supplementation, and pharmacotherapy, she improved to the point where she could meet caloric and fluid needs by mouth. She gained 800g in the two days prior to discharge.

Both patients denied any history of psychotic processes such as paranoia, hallucinations, or delusions. On exam, they had a linear thought pattern with normal speech, gait, neurological exam, and cognition. Upon admission, each patient was screened with tests of nutritional deficiencies, and strict calorie counting was done. The refeeding syndrome was not observed in either patient. Neither had been re-admitted for failure to thrive or weight loss over the following year. Unfortunately, we do not have information about their outpatient outcomes as these patients were outside our home institution.

DISCUSSION

When considering ARFID, the differential diagnosis is broad, given that several conditions can precipitate restricted food intake. A descriptive study of a cohort with ARFID from 2013 to 2016 found that every patient diagnosed with ARFID reported multiple physical symptoms at the time of ED diagnosis. Moreover, over half had a comorbid psychiatric disorder, and 71.4% were able to identify a specific trigger for the resultant eating disturbance.¹⁰

For the cases above, an optimal management and treatment plan was vague on admission. Attempted behavioral modifications resulted in weight loss in the first days after admission. Both cases presented were initially approached with the classic supplemental “makeup” protocol for eating disorders, exacerbating symptoms, and worsening anxiety-related feeding responses. The patients did not achieve adequate caloric intake until the placement of enteral feeding tubes. Interestingly, a case series comparing ARFID to AN demonstrated that patients with ARFID had significantly prolonged hospitalizations and a higher need for enteral nutrition.¹¹ Thus, there might be a benefit with early initiation of enteral tube feeds in ARFID.

The patients we present received CBT and were started on mirtazapine. Mirtazapine is classically used as an atypical antidepressant and is presumed beneficial for ARFID in several ways, including weight gain, improvement of appetite and gastric emptying, and decreasing nausea and vomiting; thus, it is used for these purposes off-label.¹² Cyproheptadine was used as an adjunct therapy to improve appetite. Atypical antipsychotics, especially olanzapine, are known to cause metabolic syndrome and appetite increase and were offered in one of these cases, but the patient and family declined.

CONCLUSIONS

As the incidence of feeding disorders rises in the pediatric population, so do the number of diverse diagnoses and approaches. We present a multifaceted treatment plan, including the early use of enteral tube feeding, mirtazapine and cyproheptadine therapy, CBT, and avoiding medicalization as a potential inpatient treatment approach for patients with ARFID since positive outcomes were noted with weight gain in both patients as well as potentially decreased length of hospital stay. Moreover, the classical “behavior and punishment” approach used in the past to treat AN/BN is likely less helpful in this population. More research is required to elucidate the causes and best management of ARFID and other functional eating disorders.

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