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What is avoidant/restrictive food intake disorder (ARFID)?

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Abstract

Introduction: Avoidant restrictive food intake disorder (ARFID) is a relatively new diagnostic category introduced in the medical literature in 2013 in the DSM-V. It includes individuals who exhibit abnormal eating behavior that may or may not lead to weight loss, but which undoubtedly leads to compromised quality of life. Causes for this behavior include patients who do not eat out of fear, neurosensory issues, and/or lack of appetite. **Objectives:** Make a review of which is ARFID. **Methods:** Integrative review of the literature on the subject in PubMed and from there, searching for additional material from the references. 30 sources were evaluated among books and published articles. **Conclusion:** The main differential diagnosis to be made is with early onset anorexia nervosa. The treatment is not well established, but there are behavioral and drug interventions that have been studied.

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INTRODUCTION

Eating-related complaints such as selectivity or avoidance are very common in pediatrics. They have been described by terms such as "food avoidance emotional disorder", "non-fat phobic anorexia nervosa", "restrictive food intake disorder", and "pediatric anorexia nervosa". In 2013, the Diagnostic and Statistical Manual of Mental Disorders[1] (DSM-V) combined the somewhat fuzzily defined nomenclature into a subgroup of conditions called Avoidant/Restrictive Food Intake Disorder (ARFID).

In light of the additions to diagnostic criteria and its similarities with ARFID, early-onset anorexia nervosa, defined based on the appearance of symptoms before the age of 14 years, is a condition that deserves attention[2]. Restrictive food intake disorder is a common element in ARFID and early-onset anorexia nervosa. However, in ARFID this disorder stems from numerous factors such as the sensory characteristics of foods, fear of the consequences of eating certain foods and/or lack of interest in eating certain foods, while in early-onset anorexia nervosa restrictive food intake disorder is caused by the fear of gaining weight[3].

Since few articles have been published on the subject in Brazil, the purpose of this review is to provide a brief account of the basic definitions tied to the disease, prevalence, treatment, and outcomes, even though there is a lot to be defined concerning this condition, even in international literature. The term ARFID is used in this article as defined in the DSM.

Avoidant/Restrictive Food Intake Disorder (ARFID)

Definition and Clinical Characteristics

ARFID is a relatively new diagnostic category introduced in the DSM-V in 2013[1]. Before its introduction, the DSM-IV used the term "feeding disorder of infancy or early childhood"[4] and included eating disorders that caused weight loss in the absence of organ disease in children aged up to six years. The DSM-V[1] does not stipulate an age restriction for the onset of the condition and considers cases of the disease in adolescents and adults.

ARFID is an eating disorder characterized by the persistent failure to meet nutrient and/or energy intake requirements in association with one or more of the four items listed below[1]:

1. Significant weight loss (or inability to achieve expected weight gain or children unable to thrive);
2. Significant nutrient deficiency;
3. Dependence on enteral feeding or nutritional supplements;
4. Significant impact on psychosocial functioning;

The following exclusion criteria apply: eating disorder not explained by unavailability of food or culturally accepted practice, not occurring as an outcome of anorexia nervosa or bulimia nervosa, or which cannot be explained by a psychiatric condition or underlying disease; and absence of body image changes.

Impact on psychosocial functioning is one of the mot striking features of this condition[5]. Culturally, eating is a form of socialization. Therefore, restrictive eating makes it impossible for individuals with the disorder to participate in family gatherings or events with friends such as meals and travels, significantly hindering their socialization prospects.

Differently from anorexia nervosa, individuals with ARFID do not suffer from body image distortion. Patients with the condition are aware of their low weight and, in many cases, want to gain weight[6]. Males develop ARFID more frequently[7] and, in some cases, patients might have a history of gastrointestinal tract disease such as gastroesophageal reflux disease, which may trigger food aversion on account of the pain, nausea, and vomiting it causes[8].

ARFID Subgroups

Three subgroups with distinctive characteristics have been described[9]:

Group I: Refusal to eat due to little appetite or lack of interest in food.

Individuals in this group have no apparent reason to explain why they refuse to eat. They present an avoidant pattern, accept only a few foods (less than 12), may be underweight, and are not necessarily concerned with their body image[10].

Group II: Refusal to eat due to food sensory properties.

In this group, refusal to eat is caused by secondary restrictions to the color, texture, flavor, and smell of foods. In 40% of the cases, other conditions such as autism spectrum disorders (ASD) or attention deficit and hyperactivity disorder (ADHD) are present[11].

Group III: Refusal to eat for fear of negative consequences from eating.

This is similar to phobic disorders. Food phobias may occur in isolation or as part of generalized anxiety disorder (GAD). The following fears are more commonly reported: vomiting, choking, suffocating, or getting contaminated from food. In some cases it is possible to identify one of these events as the element that triggered the refusal to eat[12].

Prevalence of ARFID

The diagnostic criteria for this condition were recently defined. The number of epidemiology studies that have been carried out to date about the disease is not sufficient to determine the prevalence and incidence of the condition in the general population[13]. Nonetheless, some studies have provided a preliminary idea of the magnitude of the issue.

In eating disorder clinics, the prevalence of ARFID is higher than in the general population. In North America, prevalence ranges from 7.2% to 17.4%[7,14].

Based on the new DSM-V criteria, a retrospective study analyzed the charts of 215 patients aged 8-21 years seen at an eating disorder treatment center and found a prevalence of 14%[14].

A case-control retrospective study with 172 patients with restrictive food intake disorder aged 8-18 years described a prevalence of ARFID of 13.8% based on the new DSM-V criteria[7].

A retrospective study reviewed the charts of 2231 patients aged 8-18 years seen at a pediatric gastroenterology referral center in Boston (USA) and reported a prevalence of ARFID of 1.5%. Two thirds of the patients (67%) with the disease were males. In the vast majority of the cases, the eating disorder presented itself in the form of lack of interest in food and sensory restrictions. It is important to mention that 2.4% of the patients did not meet the criteria for ARFID, although there was not enough information to either confirm or rule it out completely[15].

In population studies, the prevalence of this eating disorder is much lower. A study performed in Australia based on interviews with adults aged 15 and older found a prevalence of 0.3%[16].

In Switzerland, 1444 children aged 8-13 years answered a questionnaire. Forty-six of them (3.2%) met the criteria for ARFID. Secondary refusal to eat and food sensory characteristics were present in 60.9% of the cases, lack of interest in food or eating in 39.1%, and restriction due to negative consequences from eating in 15.2%[17].

Comorbidities associated with ARFID

Individuals with ASD are five times more likely to develop ARFID than matched peers without it[18]. It is important to mention that individuals with autism can be selective and become obese due to preference for caloric foods. This does not rule out a diagnosis of ARFID, since although some may become obese, they still develop micronutrient deficiencies that might cause other diseases such as scurvy, rickets, and anemia[18].

In addition to the association with ASD, eating disorders are also commonly seen in patients with learning disability, cognitive impairment[19], or GAD. The latter is more common in this particular eating disorder when compared to anorexia nervosa or bulimia, in which mood disorders are more common[7].

Difficulties in the differential diagnosis between ARFID and early-onset anorexia nervosa

Patients with anorexia nervosa or ARFID present with low weight and/or malnutrition and treatment requires the involvement of a multidisciplinary care team and patient families[20]. Another important element is that in both conditions patients report a sensation of fullness, epigastric pain, or lack of interest in food[21].

The differential diagnosis between patients with anorexia nervosa without fear of gaining weight and ARFID is challenging. Individuals with anorexia nervosa unafraid to gain weight usually explain their unwillingness to eat as the absence of appetite together with other irrational ideas they conjure up to justify their choices[22], which hinders the identification of the actual condition affecting them. Are they minimizing or denying concerns with body weight and image or do they have ARFID?[23] Discrepancies between what they say and what they do may provide valuable clues. Some patients with anorexia nervosa say that they are not afraid of gaining weight, but whenever they do, they become aggressive towards healthcare staff and do things such as switching off infusion pumps and vomiting, with the purpose of avoiding weight gain[24].

Management and Treatment

There still is a lot to learn about ARFID. The variety of clinical manifestations points to the need for individualized care with the involvement of a multidisciplinary team[25].

Behavioral interventions have been the subject of various studies with children. Although used in patients with other eating disorders, cognitive-behavioral therapy (CBT) still lacks the evidence for broader use in ARFID[13]. Exposure and desensitization strategies have also been employed in numerous centers. No randomized trial has been organized with adolescents or adults to find out more about treatment possibilities.

Patients with ARFID have the disease for longer[7], spend more time in hospital[26] and, when malnourished, require nasoenteric feeding more often[27] than subjects with other eating disorders.

Even though there is no treatment protocol, some general principles apply to the management of patients with this condition[25]:

1. Emphasize care for emotional distress.
2. Offer meals in a safe place, deal with patient and family stress at the time of eating, and offer healthy foods rather than snacks.
3. Call a speech and hearing therapist when needed.
4. Make sure exposure occurs in a risk-free manner.
5. Provide support to the family.
6. Watch supervised feeding videos/ homemade videos.
7. Reward the child.
8. Supervise the parents in the behavioral management of the interventions.
9. Consider treating somatization of symptoms.

Progression

The medical complications associated with this condition originate in malnutrition. Evidence indicates that malnourished individuals are more prone to developing bradycardia, QT prolongation, and electrolyte disorders, the latter with twice the frequency of occurrence when compared to individuals with anorexia nervosa[26]. It is important to mention that since it affects younger individuals when compared to other eating disorders, impacts on physical and sexual development may be more significant in ARFID.

It has also been suggested that individuals initially diagnosed with ARFID might develop anorexia nervosa during

treatment, indicating that the first might be a risk factor for the development of the latter. Concern with one's body weight may appear with the reintroduction of food in some individuals with ARFID also diagnosed with obsessive–compulsive disorder (OCD), which results in a diagnosis of anorexia that had not been evident while the patient was malnourished[28].

Some authors have suggested that patients showing signs of selectivity or neophobia from an early age tend to manifest symptoms throughout their entire lives[29].

Lange & Wallin[30] noted similar findings as they followed individuals with early-onset anorexia nervosa and ARFID with low weight for 15.9 years. About 25% of the patients with ARFID persistently met the criteria for the condition and 20% of the individuals with anorexia nervosa also showed that the two diseases might develop as chronic conditions.

CONCLUSIONS

Although ARFID has been described only recently, pediatricians have been dealing with children with eating disorders for many years. Since it is an eating disorder, ARFID produces significant nutritional and social impacts on individuals with the disease.

Diagnostic standardization facilitates the identification of subtypes of patients with restrictive food disorders, thereby enabling the introduction of better management practices for individuals with the condition.

Behavioral interventions have been the subject of various studies with children. Although used in patients with other eating disorders, cognitive-behavioral therapy (CBT) still lacks the evidence for broader use in ARFID. Exposure and desensitization strategies have also been employed in treatment.

Associations between ARFID and other psychiatric conditions have been reported. Complications from malnutrition make patients with the disease more prone to developing conduction disorders, bradycardia, and electrolyte disorders, which may potentially increase mortality.

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