

# CROHN'S DISEASE PRESENTING AS ANOREXIA NERVOSA

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## Abstract

**Introduction:** Crohn's disease (CD) is a chronic inflammatory bowel disease that can involve any part of the gastrointestinal tract. Anorexia nervosa (AN) is a severe mental disorder included in the category of eating disorders, characterized by maintaining inadequate small body weight, a distorted body associated with the fear of weight gain. CD and AN share common symptoms of weight loss and reduced oral intake. The prevalence of both pathologies has increased over time, symptoms may be similar, leading to a delayed diagnosis and requiring complex, multidisciplinary management. **Aim:** To present the case of a teenager with CD, initially diagnosed with AN. **Case report:** The 17-year-old patient was referred to our clinic for: involuntary weight loss (10 kg/3 months), nausea, asthenia, fatigue, constipation alternating with diarrhea. AN was suspected, which was supported by the pediatric psychiatrist. During the hospitalization in our clinic we noted painful perianal skin tags and anal fissures, as well as inflammation and high fecal calprotectin levels. Upper and lower digestive endoscopies were suggestive for CD. The histopathological examination confirmed the diagnosis of moderate CD. **Conclusion:** Although the two pathologies have relatively common symptomatology, in this case, anorexia is only a sign associated with Crohn's disease.

**Keywords:** anorexia nervosa, Crohn's disease, weight loss.

## Introduction

Crohn's disease (CD) is a chronic inflammatory disorder that can involve any part of the gastrointestinal tract (1). Anorexia nervosa (AN) is a severe mental disorder included in the category of eating disorders, characterized by the maintenance of a small, inadequate body weight, a disturbed view on body image associated with the fear of weight gain (2). CD and AN share common symptoms of weight loss and reduced oral intake. The prevalence of both pathologies has increased over time, symptoms may be similar, leading to a delayed diagnosis and requiring complex, multidisciplinary management (3, 4).

## Aim

We aimed to present the case of a teenager with CD, initially diagnosed with AN.

## Case report

The 17-year-old patient was referred to our clinic for: involuntary weight loss (10 kg/3 months with a body mass index (BMI) of 15.4 kg/m<sup>2</sup>), nausea, asthenia, fatigue and constipation alternating with diarrhea. AN was suspected, which was supported by the pediatric psychiatrist. She was also diagnosed with anxiety, depressive disorder, recommending investigations and treatment in the Pediatric Psychiatry Clinic. During the hospitalization in our clinic we noted painful perianal skin tags and anal fissures (Figure 1). The blood work showed moderate inflammation, anemia and a significantly increased fecal calprotectin (1970 µg / g). Infections causes were excluded. We performed an upper (Figure 1) and lower digestive endoscopy (Figure 2), which was suggestive for moderate CD (Montreal Classification A2 L3 L4 B1, PCDAI score= 32.5). The histopathological examination confirms the diagnosis. We initiated induction of remission with exclusive enteral nutrition (1200 ml polymeric formula/day, 1 ml = 1 kcal). Concurrently, maintenance therapy with Azathioprine (2.5 mg / kg / day) was started. After 2 weeks, although the patient was in clinical remission, the blood work revealed increased inflammation (PCDAI score = 40, Figure 3). Thus, we decided to step up the induction therapy using Prednisone (1 mg/ kg/day). We associated partial enteral nutrition and continued Azathioprine therapy. The patient achieved remission two weeks later (PCDAI score = 10, Figure 3).

## Discussion

CD is a chronic idiopathic intestinal inflammatory disease characterized by transmural inflammation and granulomatous lesions in the gut. Its prevalence is rising globally. Features in childhood include anorexia, weight loss, diarrhea, abdominal pain, perianal disease, pubertal and growth delay (4, 5).

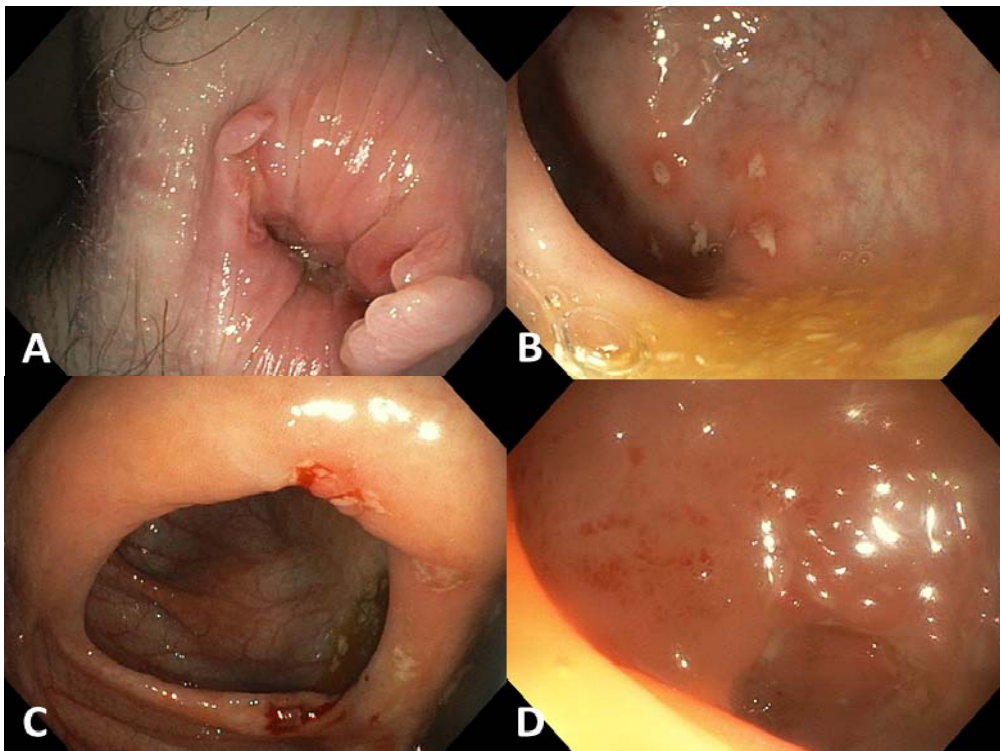
AN is an eating disorder diagnosed by the following criteria: restriction of energy consumption in relation to the requirements, leading to a significantly lower body weight in the context of age and gender. AN prevalence is 0.3% in both male and female adolescents and is increasing in developed countries (7). The prevalence of AN subtypes that appear similar but do not meet the full diagnostic criteria is 1.5% in females versus 1% in males (8).

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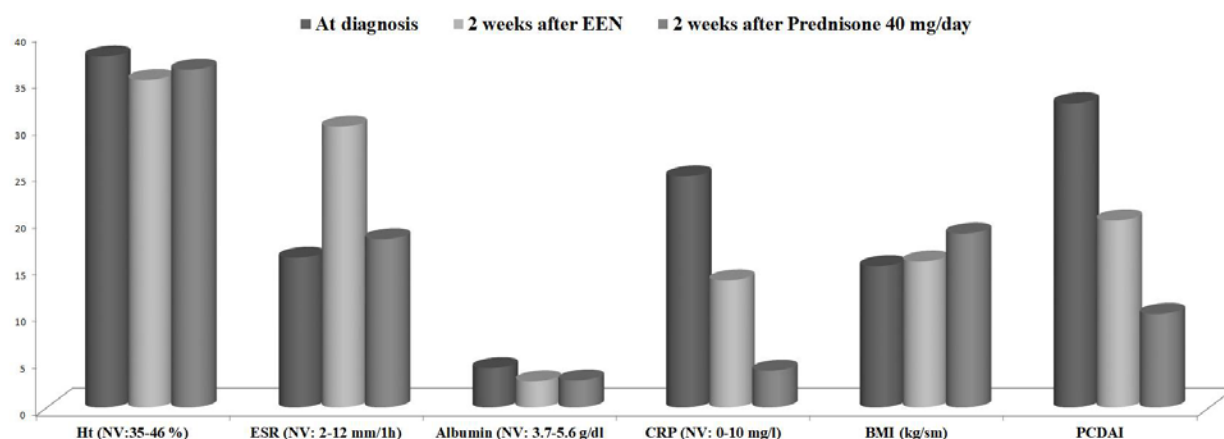
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**Fig. 1** Upper Digestive Endoscopy: Aphte of the esophagus



**Fig. 2** Lower Digestive Endoscopy: A. Inflamated Crohn's Disease skin tags; B. Aphte of the left colon; C. Ulcerations of the ileo-coecal valve; D. Congestion and aphte of the ileum.



**Fig. 2** Anthropometric and biological indices at diagnosis, after EEN and Prednisone, respectively. EEN denotes exclusive enteral nutrition; HT, hematocrit; NV, normal values; ESR, erythrocytes sedimentation rate; CRP, C reactive protein; BMI, Body Mass Index; PCDAI, Pediatric Chron’s Disease Activity Index.

The incidence of CD in adolescents is 6-7.4:100.000 per year. CD should be considered in the differential diagnosis of AN, especially in younger patients. CD and AN share certain clinical features indistinguishable in diagnosis (4). A series of published reports highlights delays in diagnosing CD due to a presumed initial diagnosis of nervous anorexia (3). Current guidelines of the American Psychiatric Association recommend the examination and exclusion of gastrointestinal disorders in the diagnosis of anorexia nervosa. Gastroenterologists should maintain a high index of suspicion regarding the development of AN in patients with pediatric inflammatory bowel disease (IBD).

Continuous weight loss in relation to disease activity is a clinical "red flag", especially among patients reporting weight satisfaction with the current weight, with normal food intake and good drug delivery. Plotting weight and height on appropriate growth charts at each visit, regardless of the reported clinical symptoms, is essential. Concerns about body image changes while on treatment should also be anticipated and explored. Access to multidisciplinary assessment of the potential factors to AN development is essential for pediatric gastroenterologists (8). Factors that include interpersonal relationships, aggression, family

dynamics, and personality traits may influence the onset of AN. IBD are associated with other mental health disorders. The rates of depression and anxiety in CD patients are higher than in the reference population, even 5 years after the initial diagnosis. Children and adolescents with IBD have higher rates of depression, anxiety and phobias, than healthy children or patients with other chronic pediatric diseases. The multidisciplinary approach and support for infants and adolescents with IBD is vital in order to elucidate such complex presentations and provide patient support. CD is a complex and very variable disease. Multidisciplinary support for children with CD disease is necessary, even during remission (9). Concerns about non-compliance with treatments, abnormal eating habits or unexpected weight loss should trigger an early multidisciplinary approach.

Although the two pathologies have relatively common symptomatology, in this case work-up revealed that anorexia was only a sign associated with CD.

**Conclusions**

Mental health disorders are commonly associated with BC, therefore it is desirable to examine and exclude gastrointestinal disorders before diagnosing AN.

**References**

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