

# Pitfalls of Diagnosis in a Case of Celiac Disease with Allergic Manifestations

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**Abstract** Celiac disease has many manifestations and the diagnosis is often difficult. We report the case of a child to which extradigestive manifestations of celiac disease masked celiac disease evolution. The association of proven allergic manifestations slowed celiac disease diagnosis.

**Keywords:** celiac disease, child, extradigestive manifestations

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## 1. Introduction

American Association of Family Physicians emphasized the following: "Ingested protein does not normally provoke an immune response. This phenomenon is termed "oral tolerance." Patients who exhibit true allergy to an ingested protein (e.g., milk or soy protein) have a typical IgE-mediated response consisting of urticaria, angioedema, and bronchoreactivity. The autoimmunity in gluten-sensitive enteropathy involves plasma cells that produce IgA and IgG; there is little or no IgE involvement" [1]. So, there is a little or no IgE involvement in celiac disease. But over the time were identified many masks of celiac disease [2,3,4]. In all cases of suspected celiac disease, the best solution is celiac disease screening with IgA antitissue transglutaminase antibodies [5].

We present a case that was a mask of celiac disease, meaning that the skin manifestations occurred but were identified as allergic manifestations, not extradigestive manifestations of celiac disease.

## 2. Case Report

The child was born to term with a weight of 3200 g and without signs of fetal distress. He was naturally fed up at the age of 3 months. Then he got mixed food.

The parents introduced diversify food in child nutrition to the age of 6 months. He presented 3 modified and pasty stools per day at the age of 1 year, with poor weight gain. Pruritic and erythematous macular eruptions occurred simultaneously on skin; sometimes appeared papules and vesicles. The medical doctor interpreted this eruption as being within a food allergy; for that reason Aeri

(Desloratadine) is given for 1 month. The evolution of cutaneous manifestations was good, meaning that these erythematous macules disappeared at the end of treatment. 2-3 modified stools per day persisted with the same weight stagnation. At the age of 2 years, our patient presented up to 5 episodes of aqueous and pasta diarrhea per day. The child required the administration of infusion, electrolyte rebalancing with glucose, saline and Na and K electrolytes. Probiotics that contain *Sacharomices boulardi* (1 / day Flucovit) were also introduced in treatment.

Clinical exam on hospitalization showed a slightly influenced general feeling, pale skin and mucous membranes, subcutaneous tissue underrepresented in totally, with a distended abdomen. Laboratory examinations revealed the existence of a deficiency anemia: hemoglobin 11.1 g/dl (normal values 12.1-17.2 g/dl), hematocrit 35% (normal values 36.8-50.2 %). In these circumstances, the medical doctor thought about the possible existence of celiac disease which was suggested by the clinical appearance of diarrhea syndrome and deficiency syndrome, namely anemia. Celiac disease screening examinations showed the following: IgA tissue transglutaminase antibodies = positive 61 U/ml (normal values <10 U/ml), IgA antiendomysial antibodies = positive (indirect immunofluorescence). Positive values of screening tests supported the diagnosis of celiac disease and biopsy of the intestinal mucosa showed us a Marsh stage 3a. The laboratory examinations for skin manifestations showed us a high level of total IgE=168 UI/ml (normal values <10 UI/ml) and a beginning of sensitization to cow's milk and egg white.

Under these conditions, the medical doctor decided a gluten-free diet (first without milk) for the patient. Digestive manifestations evolution was favorable, meaning that the child presented 1 stool per day and began

a slight weight gain. The child had a gain of 500 g after a month with gluten-free diet.

### 3. Particularities of the Case

Extradigestive manifestations of celiac disease, namely skin eruptions can mask celiac disease evolution. The existence of these manifestations was attributed to food allergies in our case. Celiac disease was questioned and investigated only in a stage in which were obvious clinical manifestations. Under the gluten-free diet, the child had a good evolution of digestive symptoms with weight gain.

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