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Neurological Disorders Associated with Gluten Sensitivity

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Abstract

Background: *Gluten sensitivity and celiac disease are increasingly recognized as causes of extraintestinal manifestations, including neurological disorders. Among these, gluten ataxia represents an important but often underdiagnosed condition in clinical practice.*

Case Presentation: *We report the case of a 56-year-old woman who presented with a two-month history of progressive bilateral upper-limb tremor, followed by dizziness, gait instability, and whole-body tremor. Initial treatment with sulpiride led to worsening of symptoms. The patient also reported chronic diarrhea over several months. Neurological examination revealed lateral gaze nystagmus and gait instability with a widened base, while cranial magnetic resonance imaging and electroencephalography were normal. Endoscopic duodenal biopsy demonstrated partial villous atrophy with increased intraepithelial lymphocytes (Marsh IIIa), consistent with celiac disease.*

Diagnosis: *Based on clinical presentation, histological findings, and exclusion of alternative causes, a diagnosis of gluten-related cerebellar ataxia was established.*

Conclusion: *This case highlights the importance of considering gluten sensitivity in patients presenting with unexplained cerebellar ataxia, even in the absence of prominent gastrointestinal symptoms. Early recognition and initiation of a strict gluten-free diet may lead to clinical improvement or stabilization of neurological manifestations. Screening for celiac disease and gluten-related antibodies should be considered in the diagnostic evaluation of cerebellar ataxia.*

Keywords: Gluten Sensitivity, Celiac Disease, Gluten Ataxia, Cerebellar Ataxia, Neurological Manifestations, Gluten-free Diet.

Introduction

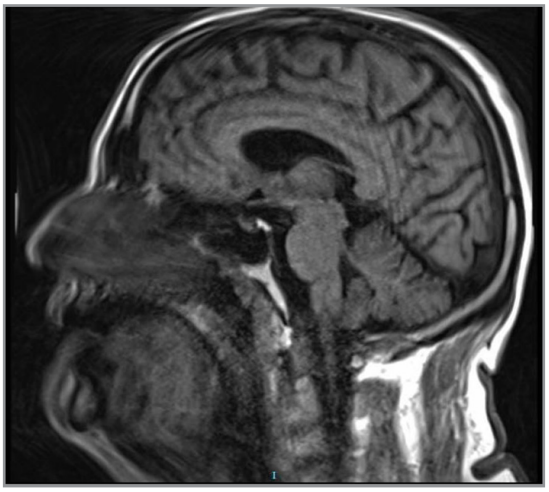
A 56-year-old patient who for the last two months has presented with predominant tremor in both upper limbs. About three days ago, she felt dizzy and unstable when turning objects. Treatment was started with sulpiride, with worsening of the tremor from the beginning. Today, the patient is seen for persistent gait instability and whole body tremor. In addition, the patient had been suffering from diarrhoea for months. He was referred to the emergency department of the Hospital and he was admitted to the neurology department.

Past medical history: Hypertension, Type 2 diabetes mellitus. Hyperlipidemia.Atrial fibrillation.

Physical Examination

Neurological examination: Attentive, oriented, nystagmus in lateral gaze, normal cranial nerves.

No papilledema, no appendicular dysmetria, autonomous gait, increased base, unstable on turning.
Complementary tests:
- Cranial MRI: normal.



- EEG: normal.
- Endoscopic biopsy results showed discreetly flattened folds of the second portion of the duodenum. Histological examination revealed partial villous atrophy with marked increase in intraepithelial lymphocytes (Marsh IIIa), all compatible with celiac disease.

Clinical judgement:
Celiac disease ataxia.

Differential diagnosis:

Cerebellar ataxia
Ig A deficiency

Conclusions

It is recommended that patients with cerebellar ataxia undergo HLA typing and be tested for the presence of anti-gliadin antibodies (IgA and IgG). If no other cause of cerebellar ataxia is determined and there is positivity for any of these antibodies, a strict gluten-free diet is recommended, and if antibody titres subsequently decrease along with marked improvement or stabilisation of the ataxia, a diagnosis of gluten ataxia is acceptable.

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