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LETTER TO THE EDITOR

Isolated Neurological Manifestation in Silent Celiac Disease

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This case report features a case of idiopathic oromandibular dystonia (OMD) that was unresponsive to traditional symptomatic therapy. However, complete resolution of symptoms was achieved following a diagnosis of celiac disease (CD). Notably, the patient has experienced a complete dissolution of symptoms while maintaining compliance with a gluten free diet (GFD).

This report highlights the evolution of symptoms in a 44-year-old female, gravida 2, para 2, who was referred from a private clinic in Riyadh, Kingdom of Saudi Arabia (KSA), to the King Faisal Specialist Hospital & Research Center (KFSHRC), Riyadh, KSA, for the management of OMD. The patient was unresponsive to therapy for 2 years. The symptomatic onset was mild, and dysphagia with food and beverage was the primary presenting complaint. Subsequently, the symptoms became exaggerated and affected the patient at rest. Although the patient's speech was comprehensible, a growing degree of dysarthria was then manifested. The dystonia was limited to the jaw, lips, and tongue but spared the neck, arms and the remainder of the body.

At the time of presentation, medications were limited to levothyroxine 100 mcg daily for preexisting hypothyroidism and infrequent over-the-counter analgesics.

After the patient was diagnosed with OMD, the daily medication included clonazepam 0.5 mg and risperidone 1 mg. Nevertheless, symptoms worsened with a predominance of uncontrolled oral movements at rest with masticatory and pronunciation difficulties. The patient had no previous neuropsychiatric history, and magnetic resonance imaging of the brain was unremarkable at that time.

The etiology of OMD was explored at KFSHRC. On examination, the patient's weight and height were 48.7 kg and 156 cm (body mass index = 20), respectively. The patient experienced sustained, involuntary writhing jaw and tongue movements both at rest and during active movements. Examination revealed slight dysarthria, both oro-lingually and labially. Cognitive recall, language and cranial nerve examination remained intact. Power was normal with no drift, as was tone and gait. The deep tendon reflexes were normal, symmetrical and bilateral, with flexor planter responses. She had no cerebellar morbidity. Both chest and abdominal examinations were unremarkable. There was no evident lymphadenopathy, no skin rashes nor discoloration.

Radiological studies at KFSHRC included an ultrasound of the ovaries and pelvis, which were both unremarkable. The hematological profile revealed a reduced hemoglobin of 10.8 g/L (11–16 g/L) with a normal iron profile. The complete blood count, renal and hepatic profiles were unremarkable. The peripheral blood smear showed normal red blood corpuscle morphology.

The rheumatological measures were not entirely within normal ranges. The perinuclear anti-neutrophil cytoplasmic antibodies (ANCA) of 9.9 U/mL exceeded the acceptable limits (0–6 U/mL). The ANCA-IF was positive. The anti-dsDNA antibody was high at 23.5 U/mL (20 U/mL). The anti-Sjogren's syndrome A (anti-SSA) and anti-Sjogren's syndrome B (anti-SSB) were both slightly elevated. The anti-SSA was 4.7 U/mL, the anti-SSB was 5.3 U/mL (4 U/mL), the anti-Sm antibody

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was 7.5 U/mL (5.0 U/mL), and the anti-RNP was less than 6.3 U/mL (10 U/mL). The antinuclear antibody was positive at a ratio of 1:40. The anti-thyroglobulin was 342 U/mL (< 115 U/mL), and the anti-thyroid peroxidase (anti-TPO) antibody was 212 (< 74 U/mL). Erythrocyte sedimentation rate was slightly elevated at 24 mm/hr with a normal CRP.

The rheumatology team ruled out underlying rheumatic, autoimmune and paraneoplastic diseases, and drug-induced tardive dyskinesia was not apparent. Moreover, the endocrinology team attributed the patient's elevated levels of anti-TPO and anti-thyroglobulin antibodies to her underlying hypothyroidism. It was recommended that levothyroxine be continued.

Subsequently, the patient was started on tetrabenazine 25 mg daily for 1 month, which was abruptly discontinued as a result of pharmacological intolerance. The risperidone dosage was then titrated to 0.5 mg AM and 1 mg PM. Eight months later, the patient developed bilateral hand tremor, while the oromandibular symptoms improved.

Ten months later, the patient's sister was diagnosed with CD, which was managed by a GFD. This prompted a gastroenterology referral for duodenal biopsies, which showed subtotal villous atrophy, adiposities on the epithelial surface and lymphocytic and eosinophilic infiltrates in the lamina propria. Anti-endomysial antibodies were detected at 8.7 U/mL. A diagnosis of CD was firmly established, and the patient began a GFD.

Six months later, there was a noticeable improvement in the patient's neurological symptoms. The doses of clonazepam and risperidone were gradually tapered until complete discontinuation. Within a year, complete resolution of symptoms was observed with compliance with a GFD, and the patient has remained symptom free for three years.

There are notable limitations to the exploration of this case. First, the patient was unable to recall a full previous pharmacological history, specifically, previous exposure to dopamine blockers. Another limitation was the disjointed medical records because the patient attended multiple healthcare centers. Mild anemia and nonspecific autoimmune marker values clouded the initial clinical diagnosis. Both findings support a diagnosis of CD and many other differential diagnoses. A further complication in the assessment of the evolution of the patient's symptoms appeared when the risperidone dosage was being tapered, which elevated some symptoms and reduced others and complicated the clinical profile.

This case may demonstrate a remarkable causal relationship between CD and OMD. The resolution of symptoms may be due to an improvement in CD on a GFD. This result suggests that in the absence of an established etiology for OMD, exploration of CD and non-pharmacological therapies, including GFD, should be considered.

CD is estimated to account for up to 10% of neurological manifestations irrespective to the presence of malabsorption symptoms.[1,2] These neurological sequelae include cerebellar ataxia, multifocal leukoencephalopathy, dementia, neuropathies, and epilepsy.[3-6] Furthermore, while a GFD is reported to improve and reverse symptoms of gluten-associated ataxia[7] and is an established therapy for CD, it has not been formally associated with OMD.

In the assessment of combined abnormal autoimmune serology and neurological symptoms, it is worth considering a diagnosis of CD. It is also worthwhile considering conservative diet modifications in these patients prior to the onset of medical therapy to gain a clear diagnosis that is unclouded by iatrogenic investigations that may hamper a clinician's ability to arrive at a clear diagnosis. This case highlights the importance of screening for secondary diseases in establishing a firm diagnosis in atypical presentations. Moreover, our findings suggest that a GFD trial should be prioritized in the management of OMD of unknown etiology.

Conflicts of Interest

The authors have no financial conflicts of interest.

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