Celiac Neuropathy: A Case Report from Kashmir (India)

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Abstract
Celiac disease is considered to be rare in parts of the world where rice is a staple cereal. Kashmir is one of such places. We present an adult Kashmiri man, who had peripheral neuropathy, which turned out to be associated with celiac disease and improved remarkably with total elimination of gluten containing foods. This is probably the first case of celiac neuropathy reported from India.

Introduction
Although Celiac disease was originally considered largely a disease of white individuals, especially persons of European descent, recent observations have established its worldwide distribution.¹ In Kashmir, the northern most part of India, where rice is the staple diet, prevalence of Celiac disease is expected to be low. We report an adult patient, of celiac disease, from this region who was suffering from polyneuropathy.

Case Report
A 63-year-old ethnic Kashmiri businessman presented in January, 2014 with chief complaint of subacute weakness of both lower limbs for the past few weeks. He had anorexia and vomiting to begin with. He was unable to walk independently. His weakness was associated with numbness and paraesthesias of both legs and feet. For the past couple of days he noted weakness of both his hands. His other associated symptom was swelling of feet. He had no history of fever, urinary disturbance, musculoskeletal symptom, rash, new cough or breathlessness. He reported back pain and vague lower limb pains for the past 20 years. He informed that for the past few years he would experience paroxysmal vertigo and tinnitus. On asking, he revealed that he was having irritable bowel syndrome in the form of “stomach upset” for the past many decades. In 2009, he was evaluated, by colonoscopy, for bleeding per rectum which revealed tiny polyp (<5 mm) in the transverse colon along with the hemorrhoids. He was taking 88 microgram of Levothyroxine daily for primary hypothyroidism. He was nonalcoholic and a heavy smoker. He denied use of any indigenous drug and significant exposure to any toxins. His family history was unremarkable. His general examination showed mild pallor and bilateral pedal edema. Neurological examination revealed, normal higher functions and cranial nerves. Upper limbs revealed no objective sensori-motor deficit. Lower limbs revealed grade 3/5 to 4/5 power bilaterally, distal weakness was more than proximal weakness. Superficial and deep sensations were

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impaired bilaterally. All deep tendon jerks, except triceps jerks, were non-elicitable. Nerve conduction studies revealed evidence of sensori-motor neuropathy in lower limbs. His serum samples tested normal for glucose, transaminases, urea and creatinine. His serum calcium was 8.2 mg/dL (reference range: 8.5-10.1 mg/dL), serum thyroid stimulating hormone was 2.79 micro units/mL, serum Vitamin B₁₂ was 2.79 micro units/mL (N: 0.27-4.2 micro units/mL), serum thyroxine was 1284 pg/mL (N: 211-911 pg/mL), anti-thyroid antibodies were < 28 U/mL, serum thyroid stimulating hormone of the 1st part of duodenum and decreased erythema in stomach, healed ulcer in upper gastrointestinal endoscopy done, confirm Celiac disease we got his anti-ttg) antibodies, which stood labelled as cryptogenic neuropathy. To accomplish this goal, inquiry about the importance of strict avoidance of gluten-containing foods. With the laudable support of his family, he complied with the prescribed dietary restriction. Slowly, over the next one year his power improved remarkably, along with his general condition and anemia. His tinnitus never recurred. He is now back to his business as usual.

Discussion

Identification of cause is the most important goal of evaluation of a patient with neuropathy, since it is the essential prerequisite for accomplishing the ultimate goal, which is the proper treatment. Despite an extensive evaluation, in approximately half of the patients of neuropathy no etiology is ever found. These patients are labeled as cryptogenic neuropathy. To accomplish this goal, inquiry about the presence of symptoms of the associated co-morbidities is very helpful. It is this inquiry, which revealed chronic gastrointestinal symptoms and helped us to establish celiac disease as cause of the neuropathy in our patient. Testing for Anti-TTG antibodies might be considered in any patient of neuropathy when there are suggestive gastrointestinal symptoms.

There are only two studies of celiac disease from Kashmir. One is a study about celiac disease causing iron deficiency and other a case report of celiac disease causing chorea.

Celiac disease is considered as an “iceberg” disease with small number of individuals having classical symptoms and large number having atypical features or no manifestations. Among the multitude of odd neurological manifestations attributed to celiac disease, the best known are cerebellar ataxia, myoclonus and sensori motor neuropathy. Others include myelopathy, dementia, psychiatric symptoms and spinocerebellar syndrome. Neurological abnormalities occur in approximately 10% of cases of adult celiac disease. Although, in literature, neuropathy has been mentioned as one of the common among neurological manifestations of celiac disease, our case report is probably the first report of neurological manifestations of celiac disease in India. Luo Starinen et. al. suggested that a search be made for Anti-TTG antibodies in patients with polyneuropathies of obscure origin.

Conclusion

In polyneuropathies of obscure origin, a search should be made for rarer causes like celiac disease.

References