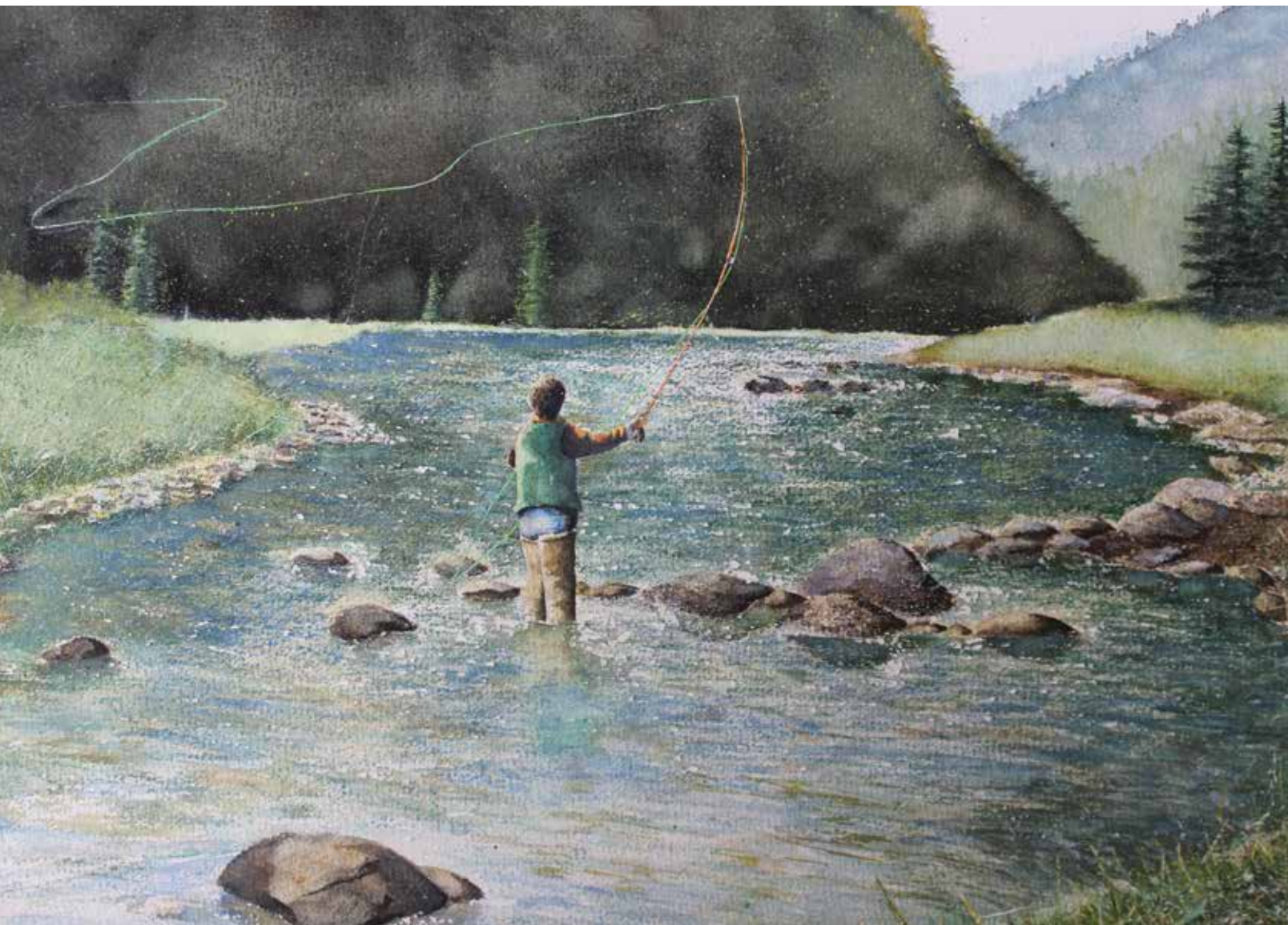


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THE MANY FACES of Celiac Disease

7 AFFORDABLE CARE ACT ISSUES



The Many Faces of Celiac Disease

BY ASHISH CHAWLA, MD

Recently, I went to Iron Hill Brewery in West Chester to meet a friend from residency. While I was scouring the menu, he quickly asked the waitress about the gluten-free menu, which to my surprise, she provided. My friend explained that his wife had just been diagnosed with celiac disease, and he joined her in the diet as it helped with his GI distresses. Immediately, several questions came to my mind: Is celiac disease on the rise? Are we just missing it in our practice? What are the risks of celiac disease? Is there any scientific truth to “gluten sensitivity,” or is my friend just following a fad diet?

Celiac disease is an autoimmune illness that can result in symptoms of chronic diarrhea, bloating, weight loss, malabsorption (symptoms similar to IBS) and has an estimated prevalence of approximately 1% in Western populations. Current studies actually indicate that celiac disease is on the rise. Researchers from Mayo Clinic

looked at blood samples from Air Force recruits from the early 1950s and compared them to age matched controls from 2011. Surprisingly, today’s men were 4 to 5 times more likely to have celiac disease (based on presence of antibodies) than their 1950s counterparts. In fact, meta-analyses have shown that for every patient identified as having celiac disease, seven to eight remain undiagnosed.

Apart from the GI symptoms, celiac disease is associated with other conditions including iron deficiency anemia, type 1 diabetes, elevated liver enzymes, dermatitis herpetiformis, osteoporosis, infertility, recurrent miscarriages, and T cell lymphoma. The newest one to join this list is coronary artery disease (CAD). In a recent study from Cleveland Clinic, individuals with celiac disease were almost twice as likely to have CAD as compared with age-matched controls – in younger and older patients even in

the absence of standard risk factors. The authors hypothesized that the chronic inflammatory state in celiac disease can have adverse effects on heart health.

Celiac disease occurs when genetically susceptible patients are exposed to dietary gluten. The vast majority of these individuals possess human leukocyte antigen (HLA)-DQ2 and/or HLA-DQ8, and these HLA haplotypes appear to play a major role in the pathogenesis by the presentation of gluten peptides to CD4+ T cells in the small bowel mucosa. The presentation of these peptides can result in the activation of intraepithelial lymphocytes that can ultimately lead to damage of the intestinal epithelium in the form of villous atrophy.

Initial screening for celiac can be done by checking for serum TTG IgA and serum a IgA levels (approximately 5–10% of patients with celiac disease have selective IgA deficiency and can have false negative TTG results) while



the patients are on gluten diet. If the TTG is positive or IgA deficiency is noted, patients should undergo an endoscopy with small bowel biopsy. The genetic testing for HLA-DQ2 or DQ8 haplotypes is done when the biopsy results and serology are not concordant or for borderline cases (can be ordered via Quest labs). Treatment for celiac disease is gluten avoidance, but in refractory cases, steroids have been used after a search for secondary causes is exhausted (lymphoma, bacterial overgrowth, lactose intolerance).

While I was surprised by some of the answers to my questions, surely my friend was not “gluten sensitive” and was just following a fad diet. Actually, the concept of non-celiac gluten sensitivity (NCGS) has gained significant interest from scientists and social media alike. GI symptoms of NCGS are similar to celiac disease, but patients also get systemic issues such as headache, “foggy mind,” joint pain, and numbness in the legs, arms, or fingers. NCGS is not an allergy or autoimmune condition, but felt to be driven by the innate immune response. The diagnosis of NCGS is made in cases with negative immunoallergy tests to wheat, negative anti-TTG serology, with normal duodenal pathology, resolution of symptoms when started on a gluten-free diet, and recurrence of symptoms when gluten is reintroduced. The estimated prevalence of this disease is much higher than that of celiac disease (approximately 6%). While initial studies have supported gluten withdrawal in these patients with resolution of their symptoms, a study in *Gastroenterology* found that patients diagnosed with NCGS responded best to a low FODMAP (fermentable, poorly absorbed, short-chain carbohydrates - fermentable, oligo-, di-, monosaccharides, diet, and polyols) and the symptoms were not noted with reintroduction of gluten. I think the jury is still out on NCGS. For me, I enjoyed my gluten-free appetizer guilt free. ■

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