Complete remission of plantar fasciitis with a gluten-free diet: Relationship or just coincidence?

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KEY POINTS FROM THIS ARTICLE:

1) "Plantar fasciitis (PF) is a chronic and disabling cause of foot pain in the adult population and has no known etiology."

2) "Plantar fasciitis typically presents itself with an insidious onset of a sharp, stabbing pain localized in the plantar medial aspect of the heel, occurring upon standing up as the movement starts ('start-up pain')."

3) Coeliac disease (CD) is a chronic inflammatory disorder of the small bowel induced in genetically susceptible people by the irritant gluten.

4) Coeliac disease patients have a high percentage of asymptomatic enthesopathies [disorders involving the attachment of tendon or ligament to bone], detected by ultrasound examination, that improve when on a gluten-free diet. These patients may suffer from rheumatic diseases, spondyloarthropathies, and autoimmune diseases. This "suggests that plantar fasciitis may not be entirely a degenerative and/or biomechanical determined disorder."

5) About 12% of those with coeliac disease also have plantar fasciitis.

6) These authors report the case of a 46-year-old Caucasian female with 2 years of severe bilateral heel pain and unmanageable plantar fasciitis who was successfully treated with a gluten free diet, despite no known history of coeliac disease. Unsuccessful treatments included local cold therapy, stretching of the plantar fascia, use of non-steroidal anti-inflammatory drugs, and 3 sessions of extracorporeal shock wave therapy (ESWT).

- The patient scored pain was 80 mm on a 100-mm visual analog scale (VAS).

- A magnetic resonance imaging (MRI) scan showed marked edema in the insertion of both plantar fasciae and in the adjacent fat tissue.

- The patient's pain became unbearable and she was extremely discouraged about her clinical status. All proposed interventions had failed.

- Gluten was removed from her diet for two weeks, even though she had no gastrointestinal symptoms, with noted improvement; this was extended and a marked reduction of pain was noted (VAS 15/100 mm).

- Reintroduction of gluten into her diet resulted in the reappearance of her heel pain, up to a moderate/severe level (VAS 60/100).

7) Gluten was, therefore, newly removed from her diet.
The patient was clinically re-evaluated 1 month after the gluten-free diet started, with a complete disappearance of foot pain (VAS 0.0 mm).

- "She also reported that walking was no longer painful, nor was dancing for that matter and that she could comfortably wear any kind of shoes. The patient remained in our care and no longer suffered pain or symptoms for 9 months after the diet had started."

- A panel of coeliac disease antibodies was assessed, all of which were negative, including:

    - immunoglobulin (Ig)G
    - IgA antiendomysium (EMA)
    - antitransglutaminase (hTTG)
    - antigliadin (AGA)

8) "The most useful marker for diagnosis of coeliac disease is the study of IgA EMA, although the absence of positive serological markers does not completely exclude it."

9) "Though serological testing is often a good means for diagnosing coeliac disease, the use of endoscopy and biopsy are the gold standard."

10) The presence of musculoskeletal problems in patients with gluten sensitivity is not rare. This is the first case report showing the successful management of plantar fasciitis with a gluten-free diet.

11) "The most important finding in our case report is that the patient had severe plantar fasciitis lasting 2 years, resistant to all the conservative treatments prescribed that suddenly improved after a gluten-free diet, despite negative coeliac disease serology."

12) The spectrum of gluten-related disorders other than coeliac disease is referred to as "non-celiac gluten sensitivity" (NCGS).

13) This patient also had an intestinal giardiasis, a parasite infection frequently associated with coeliac disease. It was treated after the successful gluten-free diet.

- "We may speculate that giardiasis has led to an altered intestinal permeability that would have caused a temporary increased susceptibility to dietary antigen loads in a vulnerable subject."

- The increased intestinal permeability may lead to a greater exposure to bacterial and dietary antigens.

- The increased intestinal permeability may determine other associated symptoms, including musculoskeletal and rheumatic complaints.

14) "A growing interest can be found in the scientific literature for the interaction between gluten and musculoskeletal complaints, as demonstrated by recent evidences of symptoms remission in patients with fibromyalgia."

15) Careful attention should be given to patients with musculoskeletal pain that are resistant to conventional therapies. They may have increased intestinal permeability and gluten sensitivities.

COMMENTS FROM DAN MURPHY

My entire family has been gluten-free for years. I recommend a number of books detailing the problems with gluten and grains for all humans, including most recently:
Wheat Belly, by William Davis, 2011
Grain Brain, by David Perlmutter, 2013
Wheat Belly Total Health, by William Davis, 2014

Another article we reviewed pertaining to gluten was:

Article Review 28-13: The gluten syndrome: A neurological disease