Letters to the Editor

Celiac disease and fibromyalgia: Is there an association?

Key words: Celiac disease. Fibromyalgia. Gluten.

Dear Editor,

It has been found that celiac disease (CD) and non-celiac gluten sensitivity (NCGS) have a high prevalence in fibromyalgia (FM) patients (1-3). NCGS is a relatively new entity characterized by gastrointestinal and extra-intestinal manifestations in the absence of CD or wheat allergy (3). It is different from CD because anti-transglutaminase (anti-tTG) or endomysial antibodies (IgA-EmA) are lacking and the intestinal mucosa is normal or with mild abnormalities as increased intraepithelial lymphocytes in the absence of villous atrophy (3).

In patients with FM plus CD or NCGS, the treatment with gluten-free diet has shown to improve symptoms, including musculoskeletal pain and fatigue (1). FM is a very difficult disease to treat. If the symptoms are significantly alleviated upon the exclusion of gluten from the diet, this form of treatment could be very interesting from the practical point of view. However, it may be difficult to know which patient would benefit from such approach. Not only the symptoms of CD and NCGS may be atypical and quite mild (2) as most FM patients have gastrointestinal symptoms due to the high degree of association of FM with irritable bowel syndrome (IBS) (1,2). Indeed, there is a suspicion of underlying gluten sensitivity among patients with IBS and it has been shown that IBS patients have much higher prevalence of CD than the general population (2,4). So, IBS may be the link between CD and FM.

Should we screen every FM patient for CD and NCGS? Data from literature is controversial (2,5,6). After approval of the local Committee for Ethics in Research and written consent from all participants, we investigated this issue by studying 188 women for IgA EmA and IgG anti-tTG. In this sample, 94 had FM according to the American College of Rheumatology's (ACR) diagnostic criteria (7) and 94 were healthy controls paired for age. IgA EmA was evaluated by indirect immunofluorescence, using human umbilical cord as substrate and anti-human IgA fluorescent conjugated (INOVA, San Diego, USA). All samples were diluted to 1:2.5. Determination of IgG antitTG was done by ELISA (Orgentec[®], Germany). The cut-off point was of 10 U/mL, in accordance with the manufacturer's instructions.

Only one FM patient (1.1%) had positive IgG anti-tTG test (titer 21 UI/ml). None of the patients were positive to IgA EmA. All healthy controls were negative for both antibodies. The positive patient was submitted to gastrointestinal endoscopy with small bowel biopsy. Result was considered to be histologically normal (relationship villus-crypt of 3:1 and with 15 lymphocytes/100 cells).

According to the results presented above, we found out that it is not worthwhile to screen every FM patients for CD. Our findings are different from those of Rodrigo et al., who established a 7% prevalence of CD and 56% of lymphocytic enteritis in duodenal biopsies corresponding to a Marsh type 1 lesion studying 104 FM patients with associated IBS (2). Zipser et al. (5), investigating 134 CD patients, found FM in 9% of them, while the prevalence of FM in general population is estimated to reach 5% (8). On the other hand, Tovoli et al. (6) described that the overall prevalence of CD in FM patients was similar to that expected otherwise, as we did. These discrepancies may be explained by the fact that the prevalence of CD in general population varies according to the geographical localization as this disease has genetic influence and is more common in people bearing HLA DQ2 and HLA DQ8 (9).

We concluded that searching for CD in FM patients is not cost-effective and that this workup should be reserved only for those with any other clue to these gastrointestinal diseases. Renato Nisihara^{1,2}, Ana Paula Marques¹, Amanda Mei¹ and Thelma Skare¹

¹Rheumatology Unit. Evangelical University. Curitiba, Paraná. Brazil. ²Department of Medicine. Positivo University. Curitiba, Paraná. Brazil

References

- 1. Rodrigo L, Blanco I, Bobes J, et al. Remarkable prevalence of coeliac disease in patients with irritable bowel syndrome plus fibromyalgia in comparison with those with isolated irritable bowel syndrome: A case-finding study. Arthritis Res Ther 2013;15: R201. DOI: 10.1186/ar4391
- Rodrigo L, Blanco I, Bobes J, et al. Clinical impact of a glutenfree diet on health-related quality of life in seven fibromyalgia syndrome patients with associated celiac disease. BMC Gastroenterol 2013;13:157. DOI: 10.1186/1471-230X-13-157
- 3. Sanders DS, Carter MJ, Hurlstone DP, et al. Association of adult coeliac disease with irritable bowel syndrome: A case-control study in

patients fulfilling ROME II criteria referred to secondary care. Lancet 2001;358:1504-8. DOI: 10.1016/S0140-6736(01)06581-3

- 4. Jadallah KA, Khader YS. Celiac disease in patients with presumed irritable bowel syndrome: A case-finding study. World J Gastroenterol 2009;14;15:5321-5. DOI: 10.3748/wjg.15.5321
- Zipser R, Patel S, Yahya K, et al. Presentations of adult celiac disease in a nationwide patient support group. Dig Dis Sci 2003;48:761-4. DOI: 10.1023/A:1022897028030
- Tovoli F, Giampaolo L, Caio G, et al. Fibromyalgia and coeliac disease: A media hype or an emerging clinical problem? Clin Exp Rheumatol 2013;31(6Suppl79):S50-2.
- Wolfe F, Clauw DJ, Fitzcharles M, et al. The American College of Rheumatology Preliminary Diagnostic Criteria for Fibromyalgia and measurement of symptom severity. Arthritis Care Res 2010;62:600-10. DOI: 10.1002/acr.20140
- White KP, Harth M. Classification, epidemiology, and natural history of fibromyalgia. Curr Pain Headache Rep 2001;5:320-9. DOI: 10.1007/ s11916-001-0021-2
- Fouda MA, Khan AA, Sultan M, et al. Evaluation and management of skeletal health in celiac disease: Position statement. Can J Gastroenterol 2012;26:819-29.