

# Should we look for Celiac disease in Irritable Bowel Syndrome?

Taghi Amiriani, Sima Besharat, Gholamreza Roshandel, Adel Shalizar

Received: 07 Dec 2010 / Accepted: 25 Dec 2010

© OMSB, 2011

**I**rritable Bowel Syndrome (IBS) is a prevalent disease around the world. It is estimated that 10%-20% of the general population suffered from the disease, regards to standard scales like ROME II.<sup>1,3</sup> It is about 2 times more prevalent in women compared to men and it is difficult differentiating from celiac disease. Celiac is a type of mal-absorption in small intestinal which is caused in genetically predisposed individuals exposed to gluten-contained regimen.<sup>1</sup>

Studies in European countries showed that more than 1% of general population has celiac disease.<sup>4,5</sup> Recent advances in diagnostic methods and achievement to diagnostic tests with high sensitivity and specificity result in higher prevalence of the celiac disease than what was estimated before and can be presented with atypic or non-gastrointestinal symptoms. Symptoms of the disease can be similar to IBS, thus celiac patient may be treated as IBS. Recent studies have been reported increasing the prevalence of celiac in IBS patients compared to normal population.<sup>3</sup>

Celiac serologic tests are not requested routinely in IBS patients. Celiac disease is treatable and recovered with gluten-free diet; therefore this study was designed to determine the prevalence of celiac in IBS patients to decide about considering this in lab test requests for IBS work-up.

This case-control study was done on IBS patients (diagnosed by ROME II criteria) referred to gastrointestinal clinic during a 2-years period (2006-2008) and including in the study voluntarily. IBS patients were labeled when other laboratory tests were reported normal (Na, K, Bun, Cr, CBC, ESR, T<sub>3</sub>, T<sub>4</sub>, T<sub>3</sub>RU and colonoscopy & sigmoidoscopy in patients older than 50 years-old) and have ROME II criteria.

Control group were whom without any gastrointestinal disease, chronic disease or IBS and were age and sex matched with case group. One hundred and sixty one cases and 172 controls were enrolled in the study. All had informed consent and demographic questionnaires were completed for all, and then referred to the certain laboratory. Tissue transglutaminase antibody was checked by ELISA method (Orthentek kit), in the research laboratory. Mean age was 31.82 ± 10.95 years in cases and 32.97 ± 13.08 years in controls. Male to female ratio was about 0.8 in both groups. ( $p=0.52$ ). Diarrhea predominance was reported in 87.2% and others were constipation predominant ( $p=0.32$ ).

In both groups Persian tribe was the most frequent type. One positive TTG-Ab was seen in each group ( $p=0.66$ ). These individuals were women from Persian tribe. In the case group, this positive patient was in 50-59 years-old age group and diarrhea predominant. In the control group she was in 30-39 years old age group.

As the results showed the prevalence serologic of celiac, characterized by tTG antibody was 0.62% in IBS patients and 0.58% in healthy controls. Other similar studies in Turkey,<sup>6</sup> and United Kingdome,<sup>7</sup> reported no positive tTG-Ab in IBS patients. On the other hand, some authors detected a low prevalence of positive celiac cases in IBS.<sup>8,9</sup>

In Iran, it was reported a little higher in IBS patients compared to healthy controls.<sup>8,10</sup> In the most recent study done in Tehran (2008), no one had positive serologic test of IgA anti-TTG antibody in IBS patients.<sup>11</sup>

According to the wide variation in the prevalence of celiac disease exists between different setting with different characteristics of patients and various serological tests, now it is the time to decide about considering celiac serologic tests in suspected IBS patients, keeping in mind these controversies.

Due to the AGA guidelines and recent publication of the ROME working team, serologic tests for CD in the work up of all IBS patients is not recommended. Clinical characteristics and prevalence of CD in the studied region are among the indicators which is suggested by ROME III to be considered when IBS patient is referred to Gastroenterology clinic.<sup>1</sup>

As it has been discussed in other studies,<sup>11</sup> physician clinical judgment is the cornerstone of making decision about referring IBS patient for CD lab test.

## Acknowledgements

Authors tend to thank Mr.Kiaii, Mr.Mirzamahmoodi, Mrs. Hashemi nasab and Mrs.Mirkarimi for their assistant in interviewing the subjects and performing lab tests. This paper was the result of a research project done as a thesis of Doctorate grading in collaboration of Golestan Medical University, Deputy of research.

## References

1. Ciclitira PJ, King AL, Fraser JS; American Gastroenterological Association. AGA technical review on Celiac Sprue. *Gastroenterology* 2001 May;120(6):1526-1540.

Taghi Amiriani, Sima Besharat ✉, Gholamreza Roshandel, Adel Shalizar  
Golestan University of Medical Sciences, Golestan Research Center of Gastroenterology and Hepatology, Gorgan, Iran  
E-mail: s\_besharat\_gp@yahoo.com

2. National Institutes of Health Consensus Development Conference Statement on Celiac Disease, June 28-30, 2004. *Gastroenterology* 2005 Apr;128(4)(Suppl 1):S1-S9.
3. Hin H, Bird G, Fisher P, Mahy N, Jewell D. Coeliac disease in primary care: case finding study. *BMJ* 1999 Jan;318(7177):164-167.
4. Feighery C. Fortnightly review: coeliac disease. *BMJ* 1999 Jul;319(7204):236-239.
5. Catassi C, Ratsch IM, Fabiani E, Rossini M, Bordicchia F, Candela F, et al. Coeliac disease in the year 2000: exploring the iceberg. *Lancet* 1994 Jan;343(8891):200-203.
6. Kamil Ozdil, Mehmet Sokmen, Ozdal Ersoy, Huseyin Demirsoy, Besir Kesici, Cetin Karaca, et al. Association of Gluten Enteropathy and Irritable Bowel Syndrome in Adult Turkish Population. *Dig Dis Sci*. 2008 Jul;53(7):1852-1855 .
7. Leeds JS, Sanders DS. Is there an association between coeliac disease and irritable bowel syndrome? *Gut* 2007 Sep;56(9):1326-1327.
8. Sanders DS, Patel D, Stephenson TJ, Ward AM, McCloskey EV, Hadjivassiliou M, et al. A primary care cross-sectional study of undiagnosed adult coeliac disease. *Eur J Gastroenterol Hepatol* 2003 Apr;15(4):407-413.
9. Sanders DS, Carter MJ, Hurlstone DP, Pearce A, Ward AM, McAlindon ME, 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 Nov;358(9292):1504-1508.
10. Shahbazkhani B, Forootan M, Merat S, Akbari MR, Nasserimoghdam S, Vahedi H, et al. Coeliac disease presenting with symptoms of irritable bowel syndrome. *Aliment Pharmacol Ther* 2003 Jul;18(2):231-235.
11. Emami MH, Kouhestani S, Gholamrezaei A, Hashemi M, Mahzouni P, Raeisi M, et al. Prevalence of Celiac Disease in Patients with Irritable Bowel Syndrome. *Govareh* 2008;13(3):192-197.