FECAL TISSUE TRANSGLUTAMINASE ANTIBODY (FTTGA) CONCENTRATIONS CORRECTLY IDENTIFY PATIENTS WITH CELIAC DISEASE

P. Heinz-Erian[1], D. Kubis[1], P. Wondrak[1], T. Müller[1], H. Ellemunter[1], J. Eder[1], G. Berger[1], M. Fankhauser[1], A. Maier[2]

[1]Pediatrics, University of Innsbruck, Innsbruck, Austria, [2]Laboratory, Maier Analytik GmbH, Sinsheim, Germany

Introduction: Celiac disease (CD) is a vastly underdiagnosed malady due to its extremely variable clinical presentation. The diagnosis of CD requires invasive measures including serological testing of specific antibodies and jejunal biopsy. A noninvasive test would help increase the detection rate of this hitherto all too often unrecognized disease.
Methods: 34 subjects (age 0.9 - 19.2 yrs) suspected of having celiac disease because of failure to thrive were tested for tissue transglutaminase- and endomysial antibodies (stTGA and EMA, respectively)and underwent jejunal biopsy for grading of the mucosa according to the criteria introduced by Marsh et al. (1). Fecal transglutaminase antibody (ftTGA) concentrations were determined in stool supernatants using a newly developed ELISA suited to detect both specific IgA- and sIGA- antibodies.
Results: The data from 3 groups of subjects (11 untreated CD patients, 12 treated CD patients and 11 non CD subjects) are shown in the table. The cut off value differentiating CD patients from normals was 100 mU ftTGA/g stool as previously determined in 38 healthy children.
In addition, in 6 of the initially untreated patients (ftTGA 354 +/- 79 mU/g stool), where follow up tests were obtained after 6 months of gluten free diet, ftTGA concentrations significantly decreased to 56 +/- 35 mU/g stool ($p < 0.05$)
Table 1:

ftTGA concentrations in CD patients and controls

Study groups	**ftTGA (mU/g stool) (range)**	**#pts with ftTGA > 100 mU/g**	**# pts with ftTGA <100 mU/g**
untreated CD pts (n=11)	376 +/- 86 (94 - 522)*	10	1
treated CD pts (n=12)	47 +/- 36 (2 - 113)	2	10
non CD subjects (n=11)	34 +/- 25 (0 - 101)	1	10

** $p < 0.05$*

Conclusion: ftTGA concentrations in untreated CD patients are significantly higher than in treated CD patients and non CD subjects and may therefore be suited to detect active CD. In addition ftTGA concentrations may be useful to monitor the adherence of CD patients to gluten free diet.

Reference(S): 1)Marsh MN et al. Eur J Gastroenterol Hepatol 1992(8):667- 673

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