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CORRELATION BETWEEN TGA-IGA LEVELS AND HYSTOPATHOLOGIC CHANGES IN CD: A STUDY IN COELIAC CHILDREN IN ALBANIA

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ABSTRACT

Diagnosis of CD is based on a number of examinations; serologic testing and duodenal biopsies being the most important. Advances in serologic testing are raising the question if duodenal biopsy is always a necessary egxamination. The purpose of the study is to present the correlation between the serum level of TgA-IgA and the significant histopathologic changes in the intestinal mucosa. Also we will try to establish the cut-off value of TgA-IgA through which we can predict the presence of histological changes, Marsh 2 or more, in the intestinal mucosa. The study included 112 children diagnosed with CD in the department of pediatrics, clinic of specialties, from 2010 to 2016 with an age range from 6 months to 18 year old. Serologic testing and duodenal biopsy were performed in all patients. Histopathologic changes were interpreted according Marsh-Oberhuber criteria. To compare the diagnostic value of the tests, and to establish the cut-off values we used the ROC curve analysis. By analysing the average values of the TgA-IgA, TgA-IgG, AgA-IgA and AgA-IgG according to the stage of disease, Marsh 0 to Marsh 3 a/b/c confirmed with biopsy, we found that TgA-IgA titer increases significantly with progresion of Marsh stage; whereas the increase of the other parameters (TgA-IgG, AgA-IgA and AgA-IgG) has no statistic significance, considering the correlation between increase of antibody titer and progression of Marsh stage. According to the data we found an increasing number of patients with elevated TgA-IgA ≥ 100 with higher Marsh stages confirmed with biopsy. Aproximately 14.3% of patients with biopsy stage M1 had TgA-IgA ≥ 100. On the other hand in patients with M3 stage this pecentage increases up to 61.5% (P=0.043). We clasified the patients based on the TgA-IgA titer in two categories; patients with TgA-IgA <100 and patients with TgA-IgA ≥ 100. The data show that most of the patients with TgA-IgA ≥ 100 experience gastrointestinal symptoms, abdomianl distension, weight loss, failure to thrive and anemia, compared with patient with TgA-IgA <100. This suggests that higher titers of TgA-IgA are associated with severe manifestations of CD in children. For a limit value of TgA-IgA ≥ 76.85 the test has a sensibility of 70.3 % and a specificity of 85.7%. Acording to our analysis this is the best combination of the parameters and thus the established cut off value oh TgA-IgA. In this stydy we found a positive correlation between seric level of TgA-IgA and the histological changes compatible with CD in the intestinal mucosa.