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Serum antitissuetransglutaminase (tTG) IgA, IgG and anti- gliadin antibodies (AGA) IgA, IgG levels as early diagnosis before intestinal biopsy in celiac disease in children and older children Iraqi patients

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The introduction into clinical practice of serological testing to detect the presence of circulating Abs against anti-tissue transglutaminase and antigliadin is largely responsible for understanding of celiac disease as multisystem disorder with myriad presentation. The prevalence of celiac disease is estimated to be 0.3-1% in North America children, and most cases remain undiagnosed. Our understanding of the clinical picture of childhood celiac disease in Iraq is limited. Children with undiagnosed celiac disease remain at risk for complications, including growth failure, delayed puberty, anemia, decreased bone mineralization and auto immune disease as well as malignancy in later years.

Aim of study: To evaluate the impact of serological testing with a case finding strategy on the incidence and clinical presentation in Iraq. And to acquaint clinicians with multisystem diversity of celiac disease.

In this study, serum samples were collected from patients referred the division of gastrointestinal symptoms in Yarmok and Al-Kadymia hospitals in Iraq. The serological testing groups were (150 cases) of each group ages of children underwent serological testing before intestinal biopsy , the age groups study were from 1-5 years and from 6-10 years and from 11-15 years from both genders .All the groups were tested for IgG,IgAantigliadin and IgG , IgA anti-tissue transglutaminase antibodies by using ELIZA test . The results showed that AGA IgA level in group of 1-5y old was positive results 73.8% and 12.17% weak positive and 14 % negative result where in 6-10 y old was 70.47 % positive , 11.42 % weak positive and 18.09 % negative and in 11-15 y old the result gave 64.1% positive and 10.34 % weak positive and 24.35 % negative result while in AGA Ig G antibodies , the of 1-5age year gave 66.1% positive and 9.95% weak positive and 23.98 % negative result. The AGA IgA in 5-10 year age 67.81 % positive, 14.94 % weak positive and 17.24 % negative result. In 11-15 year old, the result was 59.45 % positive result, 5.4 % weak positive and 35.13 % negative result.

The of IgGtransglutaminase antibodies levels in 1-5 y age was 52.56 % positive result , 5.76 % weak positive and 41.66% negative result and in group 6-10 y age gave 54.54 % , 12.98 % weak positive and 32.46% negative result . The IgG antibodies in 22-25 y old was 63.33 % positive result and 5 % weak positive and 31.66 % negative result. The IgA tTG antibodies levels in 1-5 y old was 28.7 % and 7.4 % weak positive , 63.38 % negative result. The IgA tTG antibodies in 6-10 y level was 53.12 % and 4.68 % weak positive and 42.18 % negative result, and in group of 11-15 y old was 40 % positive result and 60 % negative result.

Conclusion: AGA screening for celiac disease permits better selection of patients for duodenal biopsy and add specificity to the histological diagnosis. The result showed using AGA IgA screening in group of 1-5 years old gave better results as early detection of the disease more than tTGIgA which need detection by intestinal biopsy in addition to immunological tests.

Biography

Jaafar Zainab Mohammed has a Ph.D. degree in Microbiology from Baghdad University in Iraq and works in the Ministry of science and technology / Directorate of agriculture / biotechnological center. He has about 30 scientific papers published and now his position is head of department in center of biotechnology and work on researches concerned with auto-immune disease

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