ABSTRACT

BACKGROUND: Inflammatory bowel disease (IBD), with Crohn's Disease (CD) and ulceratice colitis (UC) as the two main disorders, is a heterogenous group of disease of unknown etiology. IBD serological markers may be important in the diagnosis of IBD, for differentiating CD from UC. The major serological marker in commonal use are ASCA and ANCA. Recently new antiglycan antibodies have been identified: anti laminaribioside carbohydrate antibodies - ALCA and anti chitobioside carbohydrate antibodies ACCA. The antibodies are significantly associated with CD.

AIMS: To evaluate the significance of the recently discovered novel antibodies: ALCA and ACCA

METHODS: Assesment of pANCA, ASCA, ALCA and ACCA was performed using the standardized indirect immunoflourescence technique and ELISA. Serum samples were obtained from 89 pacients with CN and from 33 pacients with UC. Results were considered positive if: ASCA> 15 U/ml, ALCA> 60 EU and ACCA> 90 EU.

RESULTS: ASCA was positive for 78.8% (70/89) of patiens with CD and 12,1% (4/33) of pacients with UC. pANCA was positive for 42.4%(14/33) of patiens with UC and 7,8%(7/89) of patiens with CN. The ASCA IgA test yielded 71.3% sensitivity and 93.9% specificity for CN. The ASCA IgG test yielded 57,3% sensitivity and 93.9% specificity for CN. The ANCA test yielded 41.9% sensitivity and 92.1% specificity for UC. ANCA antibodies are expressively higher by womens. ALCA was positive for 24.7% of patiens with CN and 6.0% of patiens with UC. ACCA was positive for 8.9% of patiens with CN and 6.0% of patiens with UC. The ACCA test yielded 64.0% sensitivity and 69.7% specificity for CN. The ALCA test yielded 39% sensitivity and 90.9% specificity for CN.

Sensitivity and specificity were determined based on optimal cut-off value obtained from ROC curve analysis for each assay. 10.1% of all patients with CN was serologically completely negative. 3.4%(3/89) of patiens with CN were positive for ALCA IgG,only. 1.1% of patiens with CN were positive for ACCA,only.

CONCLUSIONS: We have tried in this study, on a group of patients with CN and UC diagnosis , to verify the diagnostic contribution of newly discovered serological markers ALCA and ACCA, used to sort out patients with CN from those with UC, ASCA negative. The results that we have come to do not compellingly

support the theory of the importance of determination of new markers ALCA and ACCA in the diagnostics of IBD.

With ASCA negative patients with CN diagnosis we have proved the occurrence of ALCA marker only in 3.4 % of cases and the occurrence of ACCA marker only in 1.1% of cases with CN diagnosis. ALCA and ACCA parameters with these patients have high specificity, but they show very low sensitivity. Unfortunately they are not suitable for looking for CN patients and for sorting them out from UC, ASCA negative patients. In the near future, IBD patients should still be sorted out by means of the serological markers ASCA and ANCA. Although the value of these serological tests is partly limited if they are used individually. However, their specificity is very high if they are combined.

The importance of specification of ALCA and ACCA as supplementary test to currently used antisubstance profile, will have to be put through further research.