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PANCREATIC GP2-SPECIFIC AUTOANTIBODIES ARE MARKERS OF CROHN'S DISEASE

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Introduction The zymogen granule membrane glycoprotein (GP2) has been recognised recently as the antigenic target of Crohn's disease (CD) specific antipancreatic antibodies. The diagnostic value of IgA and IgG class anti-GP2 antibodies has been studied in a small cohort of German IBD patients. The clinical significance of these antibodies remains elusive.

The study aim was to assess the prevalence of anti-GP2 antibodies and their association with clinical parameters in a large cohort of patients with inflammatory bowel diseases (IBD).

Methods A total of 242 IBD patients including 150 with CD and 92 with Ulcerative Colitis (UC) from a tertiary referral centre in London, UK (University College Hospital) were tested for IgA and IgG anti-GP2 and ASCA antibodies using commercially available ELISA (GA Generic Assays, Germany). Assessment of antipancreatic antibodies by indirect immunofluorescence was based on commercially available pancreas tissue sections (GA Generic Assays).

Results IgA or IgG anti-GP2 antibodies were present in 49 (32.6%) CD and 11 (12%) UC patients ($p<0.01$). Anti-GP2 antibody titres were significantly higher in patients with CD compared to UC ($p<0.01$). Among the 49 anti-GP2 positive CD patients, 24 had IgG alone, 5 IgA alone and 20 IgA and IgG anti-GP2 antibodies. CD patients with positive pancreatic autoantibody tests demonstrated higher concentrations of IgG anti-GP2 antibodies compared to seronegative cases. Among the 99 CD and 13 UC ASCA positive sera, 38 (38%) and 2 (15%) were positive for anti-GP2. Among the 51 ASCA seronegative CD sera, 11 (21.5%) were positive for IgA or IgG anti-GP2. Reactivity for both ASCA and GP2 was found in 38 (25.3%) of CD and in only 2 (2.2%) of UC patients ($\chi^2=22.2$, $p<0.01$). There was no correlation of anti-GP2 and ASCA titres. Patients with CD who tested positive for anti-GP2 were more likely to have extensive or small bowel disease ($\chi^2=8.16$, $p<0.01$, OR 4.06) and less likely to have penetrating disease ($\chi^2=6.18$, $p=0.02$, OR 3.96).

Conclusion Anti-GP2 antibodies are highly specific for Crohn's disease and their testing could be of clinical value as their presence significantly relates to extensive, ileal involving and non-fistulating disease.

Competing interests PP, None declared; MGM, None declared; DR, Shareholder with GA Generic Assays GmbH; KC, None declared; AE, None declared; DPB, None declared.

Keywords antiGP2, antipancreatic antibodies, ASCA, Inflammatory Bowel disease.