Atypical, cytoplasmic and perinuclear anti-neutrophil cytoplasmic antibodies in patients with inflammatory bowel disease

A Frenzer, W Fierz, E Rundler, B Hammer & Janek Binek

Atypical, cytoplasmic and perinuclear anti-neutrophil cytoplasmic antibodies (x-, c- and pANCA, respectively) are associated with a variety of inflammatory diseases, including inflammatory bowel disease (IBD). Anti-neutrophil cytoplasmic antibodies are more common in patients with ulcerative colitis (UC) than in patients with Crohn’s disease (CD). Most publications only refer to p- and cANCA in relation to IBD. We have prospectively evaluated the reactivity of sera from 58 patients with IBD and 10 healthy controls against human neutrophils with emphasis on the distinction of the ANCA types. The sera were incubated with ethanol- and formaldehyde-fixed granulocytes to differentiate between c-, p- and xANCA. The results showed that 10 of 24 patients with UC were positive for ANCA, whereas only one of 34 patients with CD was ANCA positive. These results correspond to a sensitivity of 42%, a specificity of 97%, a negative predictive value of 91% and a positive predictive value of 75% in UC. Of the 11 ANCA-positive sera, two showed a cytoplasmic staining pattern, three showed a perinuclear and six an atypical staining pattern. The disease activity was not correlated to either the ANCA titre or to the presence of ANCA in the serum. In conclusion, ANCA are of limited value in differentiating between UC and CD. Because the majority of ANCA in patients with IBD are xANCA, these ANCA should be explored by not only incubating on ethanol-fixed granulocytes, but also on formaldehyde-fixed granulocytes.

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