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Idiopathic neutropenia: antineutrophil antibodies and clinical correlations.

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Source

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Abstract

PURPOSE:

The present study was done to evaluate the clinical characteristics of a large series of adult patients with chronic idiopathic neutropenia, and correlate the presence of antineutrophil antibodies, their class (IgG or IgM), and their ability to fix complement with clinical parameters, including other hemocytopenias, splenomegaly, and infections.

PATIENTS AND METHODS:

One hundred twenty-one adult patients with chronic idiopathic neutropenia were studied. Serum neutrophil-binding antibodies were measured using paraformaldehyde-fixed granulocytes (PFGs) from normal volunteers as target cells. 125I-labeled staphylococcal protein A was used to detect IgG antibodies while IgM antibodies were detected by using 125I-labeled mouse monoclonal anti-IgM antibody. Sera containing antineutrophil antibodies were tested for their ability to fix complement on donor PFGs by using 125I-labeled monoclonal antibody to the third component of complement.

RESULTS:

Of the 121 patients with chronic idiopathic neutropenia, 71 patients had isolated neutropenia, while 50 had neutropenia combined with either anemia and/or thrombocytopenia. Among the 71 patients with isolated neutropenia, there were 51 females (72%), compared with 28 females (56%) among the 50 patients with combined hemocytopenias ($p = 0.083$). Patients with multiple hemocytopenias were significantly older (p less than 0.01), were more likely to demonstrate splenomegaly ($p = 0.001$), and may have had more infectious complications. From all the patients, 36% of sera were shown to have antineutrophil antibodies, with a non-significant trend for these to be found more frequently in patients with multiple hemocytopenias. Sera with mixed IgG-IgM antineutrophil antibodies were significantly more likely to fix complement than those with isolated IgG or IgM antibodies, and among the patients with antineutrophil antibodies, complement-fixing antibodies were significantly associated with multiple hemocytopenias. Splenomegaly was significantly associated both with antineutrophil antibodies ($p = 0.008$) and with infections ($p = 0.007$). Antineutrophil antibodies were not associated with infections.

CONCLUSIONS:

Approximately one third of adult patients with idiopathic neutropenia have IgG and/or IgM antineutrophil antibodies demonstrable in their serum. There is a subset of patients with idiopathic neutropenia with multiple hemocytopenias who tend to be older, less likely to show female predominance, more likely to have splenomegaly and infections, and more likely to have antineutrophil antibodies, especially mixed IgG-IgM and complement-fixing antibodies.

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