Nonimmune chronic idiopathic neutropenia of adults (NI-CINA) is a frequently seen granulocytic disorder characterized by the “unexplained” persistent decrease of the number of circulating neutrophils below the lower limit of the normal distribution in a given ethnic population. The diagnostic criteria allowing the identification of the condition among other types of chronic neutropenia are presented elsewhere. The cause of the disorder and the underlying mechanisms leading to neutropenia in the affected subjects are unknown, but recent studies in our laboratory provided strong evidence for the existence of an unrecognized low-grade chronic inflammatory process in these patients, which may be involved in the pathogenesis of NI-CINA by increasing the production of a variety of proinflammatory cytokines and chemokines and therefore affecting both neutrophil production in bone marrow and neutrophil extravasation in the periphery. Here, we describe a predisposition of HLA-DRB1*1302 haplotype–carrying individuals to develop NI-CINA.

The study was carried out on 56 NI-CINA patients and 39 healthy volunteers, all residents of the island of Crete. Venous blood was collected into vacutainer tubes containing ethylenediaminetetraacetic acid (EDTA) as anticoagulant and used as a DNA source. DNA extraction was carried out by salting-out technique. For the typing of HLA alleles, polymerase chain reaction (PCR) was utilized. HLA-A, -B, and -C alleles were typed using PCR-sequence specific primers (PCR-SSP) with primer sets provided by Pelfreez Clinical systems (Brown Deer, WI). HLA-DRB1 alleles were typed using the ELPHA high resolution hybridization system provided by Biotest AG (Dreieich, Germany). HLA-DQB1 and DPB1 alleles were typed using the
InnoLiPa reverse slot blot hybridization system provided by Murex (Immunogenetics, Zwijndrecht, Belgium). Results were analyzed with the Yates continuity-corrected chi-square test using the GraphPad program. We found that the frequency of the HLA-DRB1*1302 haplotype was 21.43% in the group of patients compared to 2.56% in the controls ($P = .0199$) (Table 1). The relative risk for the carriers was 8.36. The frequencies of all other HLA haplotypes did not differ significantly between patients and control subjects.

The clinical and biologic significance of our finding is unknown, but it seems possible that the frequency of the HLA-DRB1*1302 haplotype may have a role in the development of the aforementioned unrecognized low-grade chronic inflammation. Associations of HLA haplotypes with chronic inflammatory processes have already been well documented in a variety of clinical disorders. We believe that the increased inflammatory processes have already been well documented in a variety of clinical disorders. The frequency of the HLA-DRB1*1302 haplotype in NI-CINA patients may indicate the possible genetic basis in the development of such an inflammation, and thus it may predispose the haplotype-carrying subjects to develop the disorder.

### References


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To the editor:

**CD15-expressing phagocytic plasma cells in a patient with multiple myeloma**

In mammals there are 2 cell types that can phagocytize: macrophages and neutrophils. Malignant cytaphagocytosis is a fulminant disease characterized by phagocytosis of bone marrow cellular elements mainly by marrow macrophages (histiocytes) or rarely by other cells (eg, myeloid blasts). Cytophagocytosis by plasma cells in multiple myeloma is an extremely rare condition. Plasma cells are antibody-producing cells and have no phagocytic function. There are only a few reports describing phagocytic plasma cells in patients with multiple myeloma. None of these reports could explain the mechanism or the clinical importance of phagocytosis by plasma cells. Here we report a myeloma patient with phagocytic myeloma cells expressing CD15 on their surfaces.

A 52-year-old female patient was admitted to our hospital with complaints of weakness and fatigue. Her medical history was unremarkable. Findings from a physical examination were normal, except that there was pallor. Laboratory findings were as follows: erythrocyte sedimentation rate was 120 mm/h; hemoglobin, 8.9 g/dL; white blood cell count, 3.8 × 10^9/L; neutrophil count, 1.3 × 10^9/L; and platelet count, 138 × 10^9/L. Rouleaux formation was seen on peripheral blood smear. Blood urea nitrogen, uric acid, calcium, aspartate aminotransferase (AST), alanine aminotransferase (ALT), and lactate dehydrogenase levels were normal. Serum protein electrophoresis showed a monoclonal band (4.22 g/dL) in the gamma region. Serum immunoelectrophoresis revealed an abnormal immunoprecipitin with IgG-kappa specificity. Beta-2 microglobulin level was 6478 ng/mL (normal range, 1100-2300 ng/mL). Results of x-ray studies of the extremities, skull, ribs, pelvis, and long bones were normal. Bone marrow aspiration showed normal maturation of the granulocytic, erythroid, and megakaryocytic series. The myeloid/erythroid ratio was 2:1. Plasma cells represented 22% of the nucleated cells of bone marrow, and binucleated and atypical plasma cells were seen. In one-third of plasma cells, phagocytosis of mainly erythrocytes and platelets (and rarely, neutrophils, myelocytes, and lymphocytes) was seen (Figure 1). Diffuse plasma-cell infiltration with prominent kappa

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**Figure 1. Phagocytic plasma cells.** May-Grünewald-Giemsa stain (original magnification × 1000).
Increased frequency of HLA-DRB1*1302 haplotype in patients with nonimmune chronic idiopathic neutropenia of adults

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