(1 g every 8 hours) because of its greater ability to cross the blood brain-barrier, trimethoprim/sulphamethoxazole (160/800 mg every 8 hours) and amikacin (500 mg every 12 hours). The patient's clinical condition slowly deteriorated and the patient died 73 days after the start of the antibiotic treatment. Post-mortem examination confirmed the diagnosis of CNS and pulmonary nocardiosis.

Infection remains a major cause of significant morbidity and mortality in patients with advanced CLL.[3] *N. asteroides* is the most frequent species of Nocardia involved in human infection. Although there are rare descriptions of this infection being one of the emerging infectious complications of purine analog-based therapy for CLL and low-grade lymphoma,[3] there have been no previous reports of it occurring in patients treated with chlorambucil. The most interesting thing to learn from our case is, however, that CNS involvement can be silent and elusive; in fact, the CNS may have been involved from the onset of the disease but the poor passage of imipenem and amikacin across the blood-brain barrier may have allowed its progression. Clinically, however the first sign of this complication was SIADH which constitutes an interesting and previously undescribed association. In a recently described case a patient who attained apparent control of the infection was later found at autopsy to have an active *N. asteroides* cerebral abscess.[4]

Some authors have recommended routine cranial CT scanning in all patients diagnosed as having a nocardial pulmonary infection and no neurologic signs or symptoms;[2] in patients with hematologic malignancies, this recommendation should be given even more consideration. Finally, since nocardiosis is prone to relapse following initially successful therapy,[1-3] these patients should receive long-term secondary prophylaxis during subsequent courses of chemotherapy.[5]

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Key words

Nocardiosis, SIADH, chronic lymphocytic leukemia

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Graft-versus-lymphoma effect in a patient with a refractory low-grade lymphoma

Sir,

Allogeneic bone marrow transplantation (BMT) reduces the risk of relapse in non-Hodgkin's lymphoma (NHL) by approximately half as compared to autografting.[1] The lower risk of relapse following allograft is mainly attributed to the immunologic graft versus NHL (GvNHL) effect.[2,3] The discontinuation of immunosuppressive therapy, with or without donor lymphocyte infusion (DLI), has been recently proposed as an effective approach to induce GvNHL in patients relapsed after allogeneic BMT.[3,4]

We describe the case of a patient with stage IV follicular NHL in whom a GvNHL effect was induced after allogeneic BMT by cyclosporin A (CSA) withdrawal. In January 1993, a 34-year old man presented with enlargement of axillary, inguinal and lateral cervical lymph nodes. Enlargement of abdominal and mediastinal lymph nodes was also documented. A lymph node biopsy was diagnostic for follicular NHL and iliac crest biopsy demonstrated bone marrow involvement. Cytogenetics and bcl-2 gene rearrangement analysis were not performed. The patient failed to achieve durable responses after several lines of chemotherapy, i.e. anthracycline-containing regimens, α-interferon and fludarabine. In March 1997 he underwent allogeneic BMT from an HLA-identical sibling donor. Pre-transplant re-evaluation of the disease status revealed general enlargement of both mediastinal and abdominal lymph nodes and bone marrow involvement. The conditioning regimen consisted of busulfan and cyclophosphamide, while CSA and short-course methotrexate were administered for graft-versus-host disease (GvHD) prophylaxis. He developed grade I GvHD on day +45 after transplant and methylprednisone 0.5 mg/kg/die was administered. The patient attained complete response as documented by total body CT scan and bone marrow biopsy. On day +248 bilateral cervical lymph nodes appeared with biopsy-confirmed recurrence of follicular NHL, while total body CT scan did not reveal further lymph node enlargement. CSA was immediately withdrawn in order to induce a GvNHL effect and,

after 56 days, disease regression occurred. Ten days after the clinical response, grade I GvHD of oral mucosa developed for which no immunosuppressive treatment was given. Eighteen months after CSA withdrawal, the patient is still in complete remission and treatment-free.

Recently, two major immunotherapeutic interventions were attempted in six NHL patients who relapsed after BMT: the withdrawal of immunosuppressive therapy and, in due time, DLI.[4] However, three of these cases achieved complete response after CSA or tacrolimus withdrawal without any further DLI.[4] This finding and the result obtained in our patient indicate that discontinuation of immunosoppressive therapy may restore a GvNHL effect also in indolent lymphoma, although the risk of GvHD may represent a major problem. Although spontaneous remission of low-grade NHL should also be taken into account, the temporal association of the clinical response with the CSA withdrawal indicates that the clinical response was likely to have been due to a GvNHL effect.

Considering that the notable treatment-associated mortality of myeloablative regimens in NHL limits the benefit resulting from the GvNHL effect[5,6] and that myeloablative regimens are no longer mandatory in the preparation of allografting,[7-9] the so-called *mini-allograft* may represent an alternative strategy to attain the beneficial effect of adoptive immune therapy.[10]

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Key words

Graft-versus-tumor, low-grade lymphoma, allogeneic bone marrow transplantation, cyclosporin-A.

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Rituximab for the treatment of type II mixed cryoglobulinemia

Sir,

Rituximab is an anti-CD20 human-mouse chimeric monoclonal antibody that has been shown to be effective in the treatment of B-cell low-grade non-Hodgkin's lymphoma (NHL).[1,2] Type II cryoglobulinemia is an immunoglobulin mediated disease of B-lymphocytes that may theoretically benefit from CD20 targeted therapy.

DM, a 58-year old man, presented in October 1994 with purpura and joint pain. Laboratory studies showed serum total protein and immunoglobulin levels of 71 g/L and 12 g/L, respectively, a monoclonal IgM.κ component, a rheumatoid factor level of 600 IU/mL, cryoglobulin positivity and a reduction in C4 level. Serum transaminases, serum creatinine, blood cell counts and urine analysis were normal. Serologic and genomic studies showed HCV