2/3. So far, three patients from Muenster[5] and one patient from Hamburg[6] have had transplantation. Table 1 shows their transplant-related data.

A busulfan-based, myeloablative regimen was chosen for all patients, as reduced-intensity conditioning regimens are probably associated with a higher rejection rate in patients with storage disorders.[7] Treatment-related toxicities were moderate (table 1). Neutrophil engraftment was rapid and permanent. Graft-versus-host-disease (GvHD) prophylaxis consisted of ciclosporin A and a short course of methotrexate either with or without anti-thymocyte globulin. Acute GvHD was controlled by steroids, and no chronic GvHD was observed. In contrast with the natural course of disease, all patients with transplants showed an improvement in mobility, less pain and a considerable gain of function. Before transplant, patient 1 was almost a regular wheelchair user, owing to severe contractures. Figure 1 shows the benefit of HSCT in this patient. Patient 4 was a young woman at the time of her transplant, having a milder course of disease compared with the other patients, which might reflect a different subtype on a molecular basis. The reason for HSCT was the need for numerous surgical procedures in her legs to improve mobility.

Currently, all patients are seen at least twice yearly by the outpatient BMT unit; additionally, all children are evaluated by pediatric rheumatology once yearly. Inflammatory markers (erythrocyte sedimentation rate, leucocyte count, and C reactive protein) are checked regularly; however, no data are available with regard to specific granulocyte activation markers.

Despite these preliminary data and limited experience of haematopaietic stem cell transplantation in patients with Farber's disease without involvement of the central nervous system, the results indicate that for the first time a new and promising treatment modality may be available.

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Pyridoxine toxicity courtesy of your local health food store

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Pyridoxine or vitamin B6 is a highly water-soluble vitamin that plays an important part in the functioning of many enzymes, especially those involved in amino acid metabolism. A normal adult will require 1–2 mg of pyridoxine per day. This is adequately supplied by a normal diet. Requirements are increased in pregnancy, in malnourished patients and in patients who are taking drugs that cause a depletion of pyridoxine— for example, isoniazid, theophyllines and penicillamine.

Pyridoxine toxicity is a recognised cause of sensory neuropathy. Schaumburg *et al* described sensory neuropathy after pyridoxine misuse in 1983.[1] It can occur with chronic use of pyridoxine supplementation over several years, and also with acute over-dosage with parenteral pyridoxine.[2] It is used to produce an animal model of sensory neuropathy, because unlike drugs such as cisplatin, which also cause sensory neuropathy, it does not cause systemic toxicity.

We recently saw a patient who had been taking vitamin B supplements from a health food store for the past 10 years. She had developed a peripheral sensory neuropathy affecting her hands and feet. She has had systemic lupus erythematosus for 20 years, which was initially thought to be the underlying cause of her neuropathy although her disease seemed to be in remission. However, when her vitamin supplements were reviewed, it was noted that they contained 50 times the recommended daily amount of pyridoxine.

She was advised to stop the vitamin B supplements, and in the following months, her neuropathy slowly resolved.

Patients with systemic lupus erythematosus are at risk of peripheral neuropathy, and pyridoxine toxicity should be considered in the differential diagnosis, especially if no other cause is identified. This case highlights the problems with over-the-counter drugs, which are often not mentioned by the patients. When there is a possibility of toxicity with excessive intake of supplements, the recommended daily allowance should not be exceeded.

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Figure 1 Vitamin B supplements purchased over the counter at a health food store. Each capsule contains 100 mg of pyridoxine, which is 50 times the recommended daily intake.

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Exacerbation of chronic active Epstein–Barr virus infection in a patient with rheumatoid arthritis receiving humanised anti-interleukin-6 receptor monoclonal antibody

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We describe deterioration of chronic active Epstein–Barr virus (CAEBV) infection in a patient with rheumatoid arthritis who received a single infusion of humanised anti-IL6 receptor monoclonal antibody (tocilizumab). A 60-year-old woman with rheumatoid arthritis who had been treated with methotrexate developed lymphadenopathy in October 1999, which was ameliorated in 2 months by cessation of methotrexate . Re-institution of methotrexate in September 2000 led to recurrence of lymphadenopathy, which was diagnosed as necrotising lymphadenitis by histological examination, with high titres of anti-Epstein–Barr virus (EBV) antibodies (antiviral capsid antigens IgG 1:1280, anti-early antigens IgG 1:640) and EBV DNA in plasma (3100 copies/ml). The lymphadenopathy gradually disappeared after cessation of methotrexate at the expense of active arthritis. In July 2001, the patient was enroled in a clinical trial for tocilizumab[1] and intravenously treated with the trial drug (8 mg/kg). Arthritis dramatically improved, but EBV DNA increased from 520 (3 September 2001) to 2600 copies/10^6 white cells (12 September) and liver enzymes also increased. The patient became febrile and showed hepatosplenomegaly, pleural effusion and blepharoedema. She was diagnosed as having haemophagocytic syndrome and capillary leak syndrome with exacerbation of CAEBV infection[2 3] according to her clinical manifestations and laboratory data including results of bone marrow biopsy. Treatment with high-dose corticosteroid, cyclosporin A and IL-2 activated T cells[4] was not effective. Multiple gastric ulcers were identified by gastrointestinal fibrescope. She died of disseminated intravascular coagulation and multiple organ failure (fig 1).

Because of this tragic complication, the amounts of EBV DNA in other patients enroled in the same clinical trial were measured, but this was the only patient who showed EBV DNA of over 2000 copies/10^6 white cells. Considering the fact that IL-6 regulates growth, differentiation and activation of cytotoxic T lymphocytes,[5–8] it is plausible that blockade of IL6–IL6 receptor interaction by tocilizumab would have resulted in the final breakdown of immunosurveillance for EBV. The treatment with tocilizumab might have exacerbated

Abbreviations: CAEBV, chronic active Epstein-Barr virus; EBV, Epstein-Barr virus