

reported 5 cases of PTCL, all with a long-lasting history of granulomatosis, hepatosplenomegaly, HBsAg and EBV-VCA positivity. The only surviving patient had received an allogeneic bone-marrow transplantation. Our two children had been infected by EBV with a chronic high titer of IgG against EBV-VCA, consistent with a life-long infection.⁹ EBV may infect T-cells creating reactive lymphoid proliferations without contributing to the neoplastic process; however EBV or other viral infections (i.e. Cytomegalovirus, hepatitis B), or immune defects suppressing NK activity – such as altered T4/T8 ratio – may lead to neoplastic transformation in particular hosts, and this could be the case with our patients. All available lymph node samples were therefore submitted to EBV-DNA detection without finding amplification of the viral genome. The presence of EBV-DNA is a feature of angioimmunoblastic PTCL found in Eastern Countries, being less common in Europe.^{3,10} As to optimal treatment, we agree with the Taiwan group:³ marrow transplantation can cure this disease. The role of retinoic acid cannot be assessed by anecdotal experiences, even though malignant cell differentiation and apoptosis might depend on retinoic acid administration.¹⁰ No national or international co-operative group is currently dealing with poor-prognosis PTCL: a common study is therefore needed, perhaps including both adults and children.

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Key words

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References

1. Harris NL, Jaffe ES, Stein H, et al. A revised European-American classification of lymphoid neoplasms: a proposal from the International Lymphoma Study Group. *Blood* 1994; 84:1361-92
2. Jaffe ES, Harris NL, Diebold J, et al. World Health Organization classification of neoplastic diseases of the hematopoietic and lymphoid tissues. A progress report. *Am J Clin Pathol* 1999, 111, S8-12.
3. Lin KH, Su IJ, Chen RL, et al. Peripheral T-cell lymphoma in childhood: a report of five cases in Taiwan. *Med Pediatr Oncol* 1994; 23:26-32.

4. Agnarsson BA, Kadin ME. Peripheral T-cell lymphomas in children. *Sem Diagn Pathol* 1995; 12:314-24.
5. Neuhauser TS, Lancaster K, Haws R, et al. Rapidly progressive T cell lymphoma presenting as acute renal failure: case report and review of the literature. *Pediatr Pathol Lab Med* 1997; 17:449-60.
6. de Terlizzi M, Toma MG, Santostasi T, et al. Angioimmunoblastic lymphadenopathy with dysproteinemia: report of a case in infancy with review of literature. *Pediatr Hematol Oncol* 1989; 6:37-44.
7. Leake J, Kellie SJ, Pritchard J, et al. Peripheral T-cell lymphoma in childhood. A clinicopathologic study of six cases. *Histopathology* 1989; 14:225-8.
8. Cheng AL, Su IJ, Chen CC, et al. Characteristic clinico-pathologic feature of Epstein-Barr virus associated peripheral T-cell lymphoma. *Cancer* 1993; 72:909-16.
9. Jones JF, Shurin S, Abramowsky C, et al. T-cell lymphomas containing Epstein-Barr viral DNA in patients with chronic Epstein-Barr virus infections. *N Engl J Med* 1988; 318:733-41.
10. Cheng AL, Su IJ, Chen CC, et al. Use of retinoic acids in the treatment of peripheral T-cell lymphoma: a pilot study. *J Clin Oncol* 1994; 12:1185-92.

Low-dose thalidomide in the treatment of refractory myeloma

In this report we present five cases of refractory multiple myeloma successfully treated with low doses of thalidomide.

Sir,

Barlogie's group recently reported the results of a phase 2 study with thalidomide, as a single agent, in the treatment of refractory myeloma.¹ In this study the rate of response was 32%, as shown by a reduction of at least 25% of the M-component. The study considered a gradual increase in the dose of thalidomide up to a maximum daily dose of 800 mg. The toxicity linked to the treatment was not negligible. Furthermore, in the last six months several preliminary reports have shown the efficacy of low dose thalidomide in the treatment of resistant myeloma.²⁻⁸ We present our experience on a small group of patients with refractory myeloma treated with low dose thalidomide. The study included five patients (4 males, 1 female; median age 67 years, range 58-76). All patients had received two or more different regimens of conventional therapy. No patient had been submitted to high dose chemotherapy with autologous hematopoietic stem cell transplantation. At the start of thalidomide therapy all patients had progressive disease. The patients started with 200 mg/day of thalidomide as a single therapeutic agent after providing written consent. The dose has not been increased during the whole period of the treatment. In our patients the side effects were mild or moderate (grade 1 or 2 according

Table 1.

	Patient #1		Patient #2		Patient #3	
	S	maxR %	S	maxR %	S	maxR %
Paraprotein levels (g/dL)	6	0.8 87	3	0.3 90	3.3	1.6 51.5
Bone marrow plasmacytosis (%)	60	11 82	82	30 63	30	10 66
β_2 -microglobulin (mg/L)	10.4	3.2 69	8	4.9 39	3.82	1.73 55

S= starting value; MaxR= the best response; %= percentage of response.

to WHO criteria). The dose of thalidomide was reduced to 100 mg/day in 2 patients because of constipation and a transient reduction of platelets. The median time of treatment has been 5 months (range 2-9). Four of five patients (80%) have responded to the therapy – two patients with more than 70% reduction of the M-component levels, one with more than 50% and the last one with about a 30% reduction. The fifth patient had no response and stopped the therapy after two months. The interval of time necessary to obtain the best rate of response to the therapy was 50 days (range 34-64). In the three patients with the best response to the therapy a reduction in the percentage of plasma cells in bone marrow, β_2 microglobulin levels and C reactive protein was evident (Table 1). Furthermore, a good response was obtained in one patient who reduced the dose of thalidomide to 100 mg/die early in treatment. In conclusion, although our experience concerns only five cases, we confirm the results published in scientific literature¹⁻⁸ on the efficacy of thalidomide in myeloma therapy. We point out the possibility of obtaining a good objective response⁹ with lower and better tolerated dose of drug. We, therefore, think it would be desirable to study the most suitable dose of thalidomide in a larger number of patients.

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References

1. Singhal S, Metha J, Desikan R, et al. Antitumor activity of thalidomide in refractory multiple myeloma. *N Engl J Med* 1999; 341:1565-71.
2. Barlogie B, Desikan R, Munshi N, et al. Single course D.T. PACE antiangiogenesis effects CR in plasma cells leukemia and fulminant multiple myeloma (MM). *Blood* 1998; Suppl 1: 273b.
3. Kneller A, Raanani P, Hardan I, et al. Therapy with thalidomide in refractory multiple myeloma patients – the revival of an old drug. *Br J Haematol* 2000; 108: 391-3.
4. Durie BGM, Stephan DE. Efficacy of low dose thalidomide (T) in multiple myeloma. *Blood* 1999; Suppl 1413.
5. Chen CI, Adesanya A, Sutton DM, et al. Low-dose Thalidomide in patients with advanced, refractory multiple myeloma. *Blood* 1999; Suppl: 4603 abstract.
6. Sabir T, Raza S, Anderson L, et al. Thalidomide is effective in the treatment of recurrent, refractory multiple myeloma (MM). *Blood* 1999; Suppl 548.
7. Zomas A, Anagnostopoulos N, Dimopoulos MA. Successful treatment of multiple myeloma relapsing after high-dose therapy and autologous transplantation with thalidomide as single agent. *Bone Marrow Transplant* 2000; 25:1319-20.
8. Juliusson G, Celsing F, Turesson I, Lenhoff S, Adriansson M, Malm C. Frequent good partial remissions from thalidomide including best response ever in patients with advanced refractory and relapsed myeloma. *Br J Haematol* 2000; 109:89-96.
9. San Miguel JF, Blade Creixenti J, Garcia-Sanz R. Treatment of multiple myeloma. *Haematologica* 1999; 84: 36-58.

Feasibility and efficacy of high-dose etoposide followed by low-dose granulocyte colony-stimulating factor as a mobilization regimen in patients with non-Hodgkin's lymphoma

The administration of high-dose (HD) etoposide (ETP) with higher doses of recombinant human (rh) granulocyte colony-stimulating factor (G-CSF) is useful for peripheral blood stem cell (PBSC) mobilization.¹⁻³ We report the efficacy of HD-ETP with low-dose rhG-CSF for PBSC mobilization in patients with non-Hodgkin's lymphoma (NHL).

Sir,

Twenty-three newly diagnosed patients (16 men and 7 women) with NHL were included in this study. Their median age was 51 years (range, 20-66). They were treated with 2 or 3 courses of CHOP therapy as an induction therapy. Twelve patients entered complete remission (CR), 10 patients partial remission (PR), and one patient had no change. Patients were treated with ETP 500 mg/m² i.v. for 2 hour daily on days 1 to 3. rhG-CSF (Kirin Brewery Co., Tokyo, Japan) was administered by s.c. injection at a dose of 50 μ g/m² on the second day after completion of