**Gemcitabine plus vinorelbine as an effective salvage chemotherapeutic regimen in advanced Hodgkin lymphoma**

**To the Editor:** About 20% to 30% of Hodgkin lymphoma (HL) patients experience refractory or relapsed disease, for which effective salvage treatment is needed. Varied combination regimens with gemcitabine and other agents such as cisplatin, vinorelbine, doxorubicin, ifosfamide and steroids have been evaluated for relapsed or refractory HL.1-3 These regimens generally have a favorable toxicity profile and overall response rate exceeds 70%. Vinorelbine is active as a single agent in heavily pretreated patients with HL and toxicity is mild and reversible. Thus, the inclusion of vinorelbine in second-line combination chemotherapy regimens for HL is strongly recommended.4 Gemcitabine plus vinorelbine (GV) proved to be effective in lung cancer, breast cancer and non-Hodgkin lymphoma.5,6 We report our experience using a GV regimen in two patients with advanced HL.

A 26-year-old woman presented with a huge right gluteal mass that had been present for 2 months. HL, stage IIb, was diagnosed with an initial presentation of left submandibular, chest wall, and axillary lymph adenopathy. After 6 cycles of ABVD chemotherapy (doxorubicin, bleomycin, vinblastine, dacarbazine), complete remission (CR) was achieved. One year later, her disease relapsed. After 4 courses of ABVD, CR was achieved again. She visited her prior physician because of a painless and huge mass over the right gluteal region for 2 months and disease relapse was diagnosed. She was transferred to our hospital. On physical examination, a fixed palpable tough mass approximately 15×15 cm was in the right gluteal region. MRI of the pelvis revealed a 16×14×10 cm lobulated and infiltrative lesion in the right gluteal region. Salvage chemotherapy with cisplatin and Ara-C was initiated. However, disease progression was noted after 6 courses of treatment. Rescue chemotherapy with etoposide, solumedrol and cytarabine was administrated with poor response. MRI of the abdomen revealed hepatosplenomegaly with multiple homogeneous masses over both lobes of the liver and the spleen. HL with the liver and spleen involvement was highly suspected. Rescue chemotherapy, with gemcitabine (1000 mg/m^2^) plus vinorelbine (25 mg/m^2^) days 1 and 8, every 21 days, was started. After 3 courses of treatment, CR was achieved and allelogenic peripheral blood stem-cell transplantations were performed in succession. Thirty-three months later, multiple progressive masses over the liver and spleen were found again and her disease progressed continuously with multiple lung involvement. After 3 courses of GV, partial remission was achieved. She has continued the GV regimen treatment for up to 16 courses. She remains in stable disease and good general condition at the time of writing.

The second case, a 48-year-old woman with type 2 diabetes mellitus and hypertensive cardiovascular disease on regular medication for 2-3 years was transferred to our clinic for evaluation and treatment of HL. HL, stage II was diagnosed with initial presentation of a left neck mass. After 4 courses of ABVD, CR was achieved. Two years later, her disease progressed with recurrence of the left neck and mediastinal and para-aortic lymphadenopathies. Salvage chemotherapy with ASHAP regimen was initiated. However, disease progression was noted after 1 course of treatment. Then rescue chemotherapy, with gemcitabine (1000 mg/m^2^) plus vinorelbine (25 mg/m^2^) on days 1 and 8, every 21 days, was started. After 4 courses of treatment, CR was achieved. She has been followed up regularly at our outpatient department without recurrence as of the time of writing (about 3 years).

The results of this phase II study clearly confirm that vinorelbine is effective in patients with far-advanced HL previously treated with almost all conventional drugs and resistant to other cytotoxic alkaldoids. Eghbali et al found that vinorelbine achieves a response rate as high as 90% after four cycles of therapy in advanced previously untreated Hodgkin disease.8,9 Thus, vinorelbine may rank as one of the most active agents in the management of HL.4 Arai et al performed a phase I study of GV as a part of conditioning regimen for autologous stem cell transplantation in combination with carmustine, etoposide and cyclophosphamide.10 It was deemed that the conditioning regimen containing GV was worth further investigation.

The Cancer and Leukemia Group B has studied another combination regimen (gemcitabine, vinorelbine and liposomal doxorubicin) for refractory or relapsed HL, which CR and PR rates in the entire group were 19% and 51%, respectively. The GV regimen reduces the side effects of liposomal doxorubicin, which induces as heart arrhythmias, neutropenia and alopecia and was still continuing good response. The GV regimen is reported to be effective in patients with advanced non-small cell lung cancer and metastatic breast cancer.10-11 The most common adverse effect observed in GV-treated patients was hematological toxicity. In the study conducted by Chen et al,10 World
Health Organization (WHO) grade 3 or 4 myelosuppression was commonly noted (47.5% leucopenia, 17.5% anaemia, 12.5% thrombocytopenia). Both our patients experienced grade 3 neutropenia, but there was no febrile neutropenia episode. Subsequent chemotherapy cycles could be conducted as scheduled with prophylactic filgrastim use. No obvious non-hematologic toxicities, such as nausea or vomiting, skin rash, and flu-like syndrome, were observed. We suggest that the GV regimen be considered in the choice of rescue treatment for advanced HL. It is less toxic and well tolerated.

Jia-Hong Chen, Ping-Ying Chang, Nai-Shun Yao

Correspondence:
Nai-Shun Yao, MD
Division of Hematology/Oncology
National Defense Medical Center
325, Cheng-Kong Road, Section 2, Nei-Hu
Taipei 114, Taiwan
Republic of China

T: +886-2-87927208
F: +886-2-87927209
ndmc_tw@pchome.com.tw

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