Expression of adiponectin receptor R1/R2 in primary acute myelogenous leukemia

Background: The adiponectin receptor exists in two isoforms; adipor1 and adipor2. The anti-neoplastic effects of adiponectin are mediated through them. Recent studies demonstrate that classical adiponectin receptors are highly expressed in cancer cells rather than in normal tissue and it suggest that up-regulation of receptor may play an important role in modulation of cancer proliferation. We investigated the expression of adiponectin receptors on primary de novo AML cell and evaluate the level of receptor expression. Methods: We obtained primary cells from 55 AML patients diagnosed at Yonsei University Severance Hospital and Chonnam Medical University Hwasun Hospital. Western blot analysis for Adipor1 and Adipor2 was performed and level of expression was measured and express numerically as relative intensity to alpha-tubulin band. Results: Mean expression of Adipor1 and Adipor2 are 0.253 ± 0.256 and 0.311 ± 0.319, respectively. Among 55 patients, 40 patients received conventional chemotherapy and complete remission (CR) was achieved in 32 cases (80%). We divided these patients into two groups according to the expression of receptors; High Adipor and Low Adipor. The High Adipor1 or High Adipor2 group show significantly lower CR rate than Low Adipor1 (65.0% vs 95.0%, P=0.044) or Low Adipor2 (66.7% vs. 94.7%, P=0.046). Seven cases (35%) whose response to treatment were poor showed high expression in both receptors and only one (5%) patient with Low Adipor1 and Adipor2 was refractory case (Adipor1; P=0.044, Adipor2; P=0.046). Disease free survival of highly receptor expressing group also seemed to be prolonged in low AdipoR1 group (P=0.160) especially in patients who did not undergone hematopoietic stem cell transplantation (p=0.055). Conclusions: These findings indicate that adiponectin and adiponectin receptors also play a certain role in leukemogenesis and the expression of adiponectin receptors may be one of prognostic factors for de novo AML. The further study to evaluate the exact mechanism of adiponectin in leukemogenesis must be needed.

A phase II study of IMEP for previously untreated stage I/II Extranodal NK/T cell lymphoma, nasal type: interim analysis of KCSG-LY04-03 trial

Background: Extranodal NTCL, nasal type is relatively common among Asians compared to Western population and its optimal therapy is still controversial. This study evaluated the efficacy and safety of first-line IMEP chemotherapy. METHOD: This was multi-center, prospective, phase II study. Previously untreated patients with Ann Arbor stage I/II were eligible. IMEP (Ifosfamide 1.5 g/m2 (days 1-3), methotrexate 30 mg/m2 (days 3 and 10), etoposide 100 mg/m2 (days 1-3) and prednisolone 60 mg/m2 (days 1-5)) was administered every 3 weeks (maximum 6 cycles) and response was assessed every 2 cycles. After completion of chemotherapy, radiotherapy (40-54 Gy according to response) was delivered. Primary end point was response rate and secondary end points were toxicity, time to treatment failure (TTF) and overall survival (OS). Results: Between Dec 2004 and Jul 2008, thirty-six patients were enrolled; median age 54 years (29-70); M/F 25/11; PS 0/1/2 16/19/1; Stage IE/IIE 24/12; Normal/Elevated LDH 25/10; IPI score 0, 1/2/3 30/6/0. Of thirty-one patients whose response is evaluable, overall response rate was 77.4% with 9 CRs, 15 PRs, 5 SDs and 2 PDs. After a median follow-up of 31.4 months (8.2-45.5 months), median TTF was 36.8 months (95% CI, 0-86.8). Median OS was not reached and 3YSR was 69.0%. Grade 3/4 leukenopenia and neutropenia developed in 22.3% and 31.3% of 179 cycles administered, respectively. Neutropenic fever was observed in 7 patients (20.0%). Non-hematologic toxicities were well tolerated. Conclusion: First-line IMEP chemotherapy showed moderate efficacy in early stage extranodal NTCL, nasal type and also showed moderate hematologic toxicities.