The Role of Maintenance Systemic Chemotherapy for Urothelial Carcinoma

Introduction and Objective: Patients with metastatic urothelial carcinoma (UC) are routinely treated with systemic chemotherapy. Cisplatin-based multiagent chemotherapeutic regimens produce complete response in approximately 20% of patients, although long-term disease-free survival is rare. We assumed that prolonging the time to worsening disease and also possibly survival in maintenance chemotherapy. We compare recurrence-free survival and overall survival in patients with metastatic UC treated with cisplatin-based chemotherapy (MEN:from 2001 to 2006) or gemcitabine/cisplatin (GC:from 2007 to 2008) in maintenance group or no maintenance group.
Materials and Methods: From 2001 to 2009, a total of 30 patients were assigned: 15 to the maintenance group and 15 to the no-maintenance group. The MEN regimen consisted of methotrexate 30mg/m(2) on day 1; THP-ADM100 mg/m(2)on day 2; and nedaplatin 100 mg/m(2) on day 2; MEN was given every 21 days. The GC regimen consisted of gemicitabine 1000 mg/m(2) on day 1,8,15; and cisplatin 100 mg/m(2) on day 2; GC was given every 28 days. Maintenance group received 3 to 4 successive cycles of chemotherapy and every 3 months of 1 cycle therapy to 1-2 years. The no maintenance arm received 3 to 6 successive therapy and received no further therapy except for recurring disease.
Results: The average maintenance cycles were 3 (1 to 8) in maintenance group. One year recurrence-free survival was 56.8% in maintenance group, 13.3% in no maintenance group (log rank p= 0.0231). Two year overall survival was 46.3% in maintenance group, 12.2% in no maintenance group (log rank p= 0.0148). The most significant toxic effects associated with maintenance chemotherapy was thrombocytopenia and no therapy-related deaths were seen in both groups. All patients experienced Grade 3 or 4 thrombocytopenia, while Grade 3 or 4 neutropenia was seen in 8 patients.
Conclusion: Compared to standard induction therapy, the maintenance chemotherapy was beneficial and tolerable in patients with metastatic urothelial cancer.