Efficacy and Safety of Docetaxel plus Estramustine Chemotherapy in Castration Resistant Prostate Cancer: A Single Institution Experience

Introduction and Objectives: Docetaxel-based chemotherapy is the standard treatment in castration resistant prostate cancer (CRPC). A synergistic effect has been demonstrated with docetaxel in combination with estramustine. However, due to concern about potential adverse effect of estramustine, such as gastrointestinal disturbance, cardiovascular toxicity, combination with estramusitine is less prevalent than prednisone. Furthermore, the clinical benefit of combination with estramustine remains controversial. We assessed the efficacy and safety of docetaxel plus estramustine in CRPC.
Materials and Methods: Thirty consecutive CRPC patients treated between January 2008 and December 2011 were included in this analysis. Docetaxel was given at a dose of 70 mg/m^2, on day 2 and oral estramustine 840mg was administered concurrently for five consecutive days on day 1-5. Treatment was repeated every 3 weeks and continued until evidence of disease progression or unacceptable toxicity. Prostate-specific antigen (PSA) levels were evaluated at least once every 4 weeks.
Results: Mean age was 71 (range, 51-84) years old and median pretreatment PSA was 112 (range, 11-1641) ng/ml. Median follow-up duration was 7 (range, 2-68) months and median treatment cycle was 6 (range, 1-29) cycles. Twenty-four (80.0%) patients had consecutive PSA declines, 20 (66.7%) patients showed PSA response (> 50% PSA declines). Among 24 eligible patients for radiologic measurable disease response, 11 (45.8%) patients showed partial response, 9 (37.5%) patients showed stable disease, and 4 (16.7%) patients showed progressive disease. Median progression free survival and median overall survival were 5 (range, 0-56) and 8 (range, 0-76) months. Major severe toxicities were grade 3 or 4 (CTCAE version 3.0) neutropenia in 3 patients and grade 3 or 4 anemia in 2 patients. There were no gastrointestinal or cardiovascular grade 3,4 adverse events. There are no patients who could not continue the treatment due to toxicity.
Conclusions: Docetaxel plus estramustine chemotherapy was effective and well tolerated treatment for CRPC patients. Docetaxel plus estramustine chemotherapy represents a comparable efficacy and safety to docetaxel plus prednisone. The comparative study is necessary with docetaxel plus prednisone.