Abstract

We retrospectively evaluated the oncologic outcomes of paclitaxel, cisplatin, and gemcitabine (PCG) with those of gemcitabine and cisplatin (GC) as neoadjuvant chemotherapy in muscle-invasive bladder cancer (MIBC) patients. The primary outcome was efficacy: pathological complete response (pCR), ypT0N0; and pathological objective response (pOR), ypT0N0, ≤ypT1N0, or ypT0N1. Secondary outcomes included overall survival (OS), recurrence-free survival (RFS), predictive factors for pOR, OS, and RFS, and hematologic adverse events (AEs). Among 113 patients treated (PCG, n=28; GC, n=85), similar pOR and pCR rates were achieved by the groups (pOR: PCG, 57.1% vs. GC, 49.4%; p=0.52; pCR: PCG, 39.3% vs. GC, 29.4%; p=0.36). No significant differences were observed in OS (p=1.0) or RFS (p=0.20). Multivariate logistic regression analysis showed that hydronephrosis (odds ratio [OR] 0.32, 95%CI: 0.11–0.92) and clinical node-positive status (cN+) (OR 0.22, 95%CI: 0.050–0.99) were significantly associated with a decreased probability of pOR. On multivariate Cox regression analyses, pOR achievement was associated with improved OS (hazard ratio [HR] 0.23, 95%CI: 0.10–0.56) and RFS (HR 0.30, 95%CI: 0.13–0.67). There were no significant between-group differences in the incidence of grade ≥3 hematologic AEs or dose-reduction required, but the PCG group had a higher incidence of grade 4 neutropenia.

Keywords: urothelial carcinoma, paclitaxel, cisplatin, gemcitabine, neoadjuvant