A pilot study of concurrent chemoradiotherapy with gemcitabine and cisplatin in patients with locally advanced biliary tract cancer

H.M. Kim1, K.J. Lee2, S.W. Yi3, J.H. Lee1, S. Bang4, S.Y. Song5, S.W. Park6
1Yonsei University Wonju College of Medicine, Wonju, Republic of Korea
2Department of Internal Medicine, Yonsei University Wonju College of Medicine, Wonju, Republic of Korea
3Yong-in Severance Hospital, Seoul, Republic of Korea
4Yonsei University, Seoul, Republic of Korea
5Division of Gastroenterology, Department of Internal Medicine, Severance Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea
6Yonsei University College of Medicine, Seoul, Republic of Korea

Introduction: Gemcitabine and cisplatin chemotherapy are standard treatment for patients with advanced biliary tract cancer. The purpose was to evaluate the efficacy and safety of gemcitabine and cisplatin based concurrent chemoradiotherapy in patients with locally advanced biliary tract cancer.

Methods: Patients with pathologically-proven locally advanced biliary tract cancer were eligible. Gemcitabine was administered intravenously at a dose of 1,000 mg/m², day 1, 8 and 15. Cisplatin was administered intravenously at a dose of 100 mg/m², day 1. Concurrent radiotherapy of 180-200 cGy per fraction was delivered in 25-28 fractions. After treatment completion, tumor response was evaluated by computed tomography.

Results: Eighteen patients were enrolled between August 2006 and February 2009. The median age was 61 years (range: 38-72 years). Eight patients (44.5%) had gallbladder cancer, six patients (33.3%) had Klatskin’s tumor, and four patients (22.2%) had gallbladder cancer. After treatment, the partial response was achieved in five patients (27.8%), and the stable disease was achieved in 13 patients (72.2%). The overall response rate was 27.8%, and the disease stabilization rate was 100%. There was no grade 4 toxicity or treatment-related death. The common grade 3 toxicities were thrombocytopenia (33.3%) and anemia (11.1%). The median progression-free survival and median overall survival were 6.8 months (range: 5.6-19.8 months) and 9.6 months (range: 5.4-30.4), respectively.

Conclusion: This study shows that gemcitabine and cisplatin based concurrent chemoradiotherapy was feasible and tolerable in patients with locally advanced biliary tract cancer.