Clinical Prognostic Factors and Treatment Outcomes for Survival of Patients with Cholangiocarcinoma

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**Background:** Cholangiocarcinoma (CCA) is an uncommon primary liver cancer worldwide, but it is commonly found in Asia including Thailand. With an increasing incidence, prognosis is poor as a lethal cancer. There are various prognostic factors for CCA that affect survival outcomes, due to different clinical presentation and varied diagnostic and therapeutic modalities. To date, a satisfactory prognostic factor has not been yet understood.

**Objective:** This study aimed to evaluate clinical prognostic factors and treatment affecting survival outcomes in patients with cholangiocarcinoma.

**Methods:** Cholangiocarcinoma patients were identified from database between January 2012 and December 2016. A retrospective review of 83 medical records was performed. Median follow time was more than 12 months. Survival outcome was estimated using Kaplan-meier analysis. Demographics, clinical presentation, laboratory test, histopathological data, and treatment modalities affecting survival outcomes were evaluated for prognostic factors relating to mortality by using univariate and multivariable statistical analysis.

**Results:** 83 patients were identified. Median overall survival was 11.1 months. Unresectable or metastatic CCA patients were 73.5% (61/83). Cox-regression univariate showed higher levels of alkaline phosphatase, WBC count, CA 19-9 level, with prolonged prothrombin time. Unresectable, metastasis was identified as an important clinical predictor of patient mortality. Treatment modalities that significantly affected survival outcomes were bile duct drainage, surgery, and palliative chemotherapy. (As shown in Table). Poor prognostic outcomes of survival depended on staging by resectability and metastasis (P < 0.01).

**Conclusion:** Potential of surgery as the mainstay of treatment can provide the best survival prognosis of patients with CCA. Treatment involving either bile duct drainage or chemotherapy also prolongs CCA patient survival. Poor clinical prognostic factors which shorten survival are prolonged PT, with higher WBC, ALP, and CA19-9.

**Keywords:** Cholangiocarcinoma, Prognostic factor, Treatment outcomes, Overall survival