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## Surgical Outcome of Extrahepatic Bile Duct Cancer and the Impact of Preoperative Bilirubin Level

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**Backgrounds and Aims:** Extrahepatic bile duct cancer is classified as proximal, middle and distal bile duct cancer according to the anatomical location of the tumor in the biliary tree. The surgical extent was determined according to the location of the tumor. The aim of this study was to evaluate surgical outcome of extrahepatic bile duct cancer in a single center during 18 years. And the impact of preoperative bilirubin level was also investigated.

**Patients and Methods:** We analyzed retrospectively data for 166 patients who underwent surgical exploration for extrahepatic bile duct cancer between January 1990 and June 2008 at the Korea University Guro Hospital.

**Results:** Of the 166 patients, there are 52 hilar cholangiocarcinoma and 114 mid and distal bile duct cancers. Forty two patients underwent bypass or R2 resection, and 124 patient underwent R0 or R1 resection. The 5-year survival rate decreased with curativity: 28.7%, 13.1%, and 0% respectively. Univariate analysis revealed that overall survival rates for the 124 patients who underwent R0 or R1 resection were location of the tumor (hilar cholangiocarcinoma vs mid-distal bile duct cancer,  $p=0.001$ ), tumor differentiation ( $p<0.001$ ), resection margin ( $p=0.007$ ), presence of lymph node metastasis ( $p=0.004$ ) and stage (according to AJCC 7 th edition,  $p=0.001$ ). Multivariate analysis revealed that tumor differentiation was a significantly independent prognostic factor affecting on survival ( $p<0.001$ ). Fifty two patients (group 1) showed total bilirubin level higher than 15 mg/dl on admission. And the other patients were classified into group 2. Significantly higher portion of male patients, preoperative biliary drainage. However, the pathological characteristics and R status did not differ between two groups. Group 1 patients results in a significantly higher occurrence of complication.

**Conclusion:** Extrahepatic bile duct cancer achieved survival benefit from R0 resection. And lymph node metastasis and poorly differentiated tumor are poorer prognostic factor. The total bilirubin level higher than 15 mg/dl on initial admission did not affect overall survival and pathological characteristics were not different according to the total bilirubin level on initial admission. However, bilirubin level higher than 15 mg/dl results in a significantly higher occurrence of complication.