Long Term Treatment Results and Prognostic Factors of Hilar Cholangiocarcinoma

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Background: Surgical treatment of hilar cholangiocarcinoma is difficult and long-term outcome is still unsatisfactory. We aimed to analyze the outcome of hilar cholangiocarcinoma according to the type of surgery, and to inspect prognostic factors.

Materials and Methods: Between 1981 and 2008, 710 patients with hilar cholangiocarcinoma were treated at our institute. There were 490 male (69.0%) and 220 female (31.0%). Resection with curative intent was performed in 225 patients (31.8%). Type of resection were hepatobiliary resection (HBR, n=151), bile duct resection (BDR, n=56), pancreatoduodenectomy (PD, n=9), and hepatopancreatoduodenectomy (HPD, n=9).

Results: R0 resection was done in 142 patients (63.1%); 98 HBR (64.9%), 33 BDR (58.9%), 6 PD (66.7%), 5 HPD (55.6%). Overall 5 year survival rate was 21.0%; 19.0% in HBR, 29.1% in BDR, 13.3% in PD, and 0% in HPD. Recurrence of tumor occurred in 131 patients (58.2%). Recurrence site was loco-regional in 53 patients (40.5%), and remote site in 94 (71.8%). In multivariate analysis, lymph node metastasis (p=0.013) and histologic grade (p=0.014) were significant prognostic factors. Eighty-three patients (36.9%) had positive resection margin. Forty-four patients (53.0%) of them recurred: loco-regional recurrence in 18 patients (21.7%), and remote site in 35 (42.2%). In patients with positive resection margin, concurrent chemoradiation (p=0.47) and chemotherapy (p=0.001) were significant prognostic factors.

Conclusion: Radical resection is mandatory for long-term survival of hilar cholangiocarcinoma. Poor long-term outcome can be anticipated in patients with lymph node metastasis or poorly differentiated carcinoma. Adjuvant chemoradiation therapy can improve survival in patients with positive resection margin.