

Surgical treatment of peripheral intra-hepatic cholangiocarcinoma and peri-hilar cholangiocarcinoma: analysis of prognostic factors

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SUMMARY: Surgical treatment of peripheral intra-hepatic cholangiocarcinoma and peri-hilar cholangiocarcinoma: analysis of prognostic factors.

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This study indentified that the major prognostic factors related with survival of surgical resected cholangiocarcinoma were the radicality of surgery and the presence of macrovascular invasion. Moreover we identified that perihilar cholangiocarcinoma have more frequently negative clinico-pathological factors such as non radical (R+) resection, perineural infiltration and macro-vascular invasion compared to intrahepatic peripheral tumors. Moreover perihilar tumors are associated with shorter long-term survival.

KEY WORDS: cholangiocarcinoma, surgery, prognostic factors.

Background and aim

Cholangiocarcinoma can be classified as peripheral intra-hepatic (ICC) or perihilar (PCC) depending on where it arises along the biliary tree. Despite considerable advances in the knowledge of this disease a widely accepted classification of PCC and ICC is still debated. The objectives of this study is to evaluate the surgical outcomes of patients with PCC and ICC, identify the main clinico-pathological prognostic factors related to survival and compare the outcome and the clinico-pathological factors that characterize PCC and ICC.

Methods

Ninety-five out of 152 patients observed between January 1990 and December 2007 in a single division

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of surgery of University of Verona Medical School underwent the resection of ICC (33 patients) or PCC (62 patients); the resectability rate was 62.5%.

Results

Overall surgical mortality and morbidity were 8.4% and 48%, respectively. Overall median survival was 24 months with a 3- and 5-year actuarial survival rate of 45% and 23%, respectively. Univariate analysis identified that prognostic factors for survival were macroscopic types of the tumor (ICC or PCC), the resection of extrahepatic bile duct, radical resection, the presence of lymph node metastases and of macro-vascular invasion.

Survival was related with the macroscopic type of the tumors with a 5-year actuarial survival rate of 26% and 13% for ICC and PCC, respectively. Univariate analysis identified that negative clinico-pathological factors where significant more frequently found in PCC compared to ICC.

Conclusion

Our study indentified that the major prognostic factors related with survival were the radicality of surgery and the presence of macrovascular invasion. Moreover we identified that ICC have longer survival rate compared to PCC. PCC showed an higher frequency of negative clinico-pathological factors such as non radical (R+) resection, perineural infiltration and macro-vascular invasion. Radical surgery can achieve good results in ICC whereas the results of surgery for PCC are still unsatisfactory. Future strategies to improve the results of surgical therapy should include advances in early diagnosis and the use of additional therapeutic approaches (i.e. adjuvant or neo-adjuvant therapies).