The impact of preoperative BMI on recurrence risk in resectable distal cholangiocarcinoma – overweight as a positive prognostic factor

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Introduction: While overweight has been linked with inferior long-term outcomes after surgery for pancreatic adenocarcinoma or intrahepatic and perihilar cholangiocarcinoma, the impact of a high BMI in distal cholangiocarcinoma (dCCA) is not clear. This study examined the influence of BMI on recurrence risk, together with patient-reported experience measures (PREM) of appetite and nausea.

Method: Consecutive patients undergoing up-front pancreatoduodenectomy for dCCA at a regional centre (Karolinska University Hospital, Stockholm, Sweden) 2010-2016 were retrospectively included. During this period, preoperative PREM data were clinically registered using EORTC-QLQ30. Primary outcome was disease-free survival (DFS), analysed by Kaplan-Meier method.

Result: Forty-seven patients underwent pancreatoduodenectomy for dCCA. The median BMI was 24.4. One patient was underweight (BMI <18.5), while twenty-two were overweight (BMI 25-29.9, n=18) or obese (BMI ≥30, n=4). Patients with overweight or obesity had significantly longer DFS compared to patients with normal weight (BMI 18.5-24.9): 60 months versus 18 months (P=0.013, Figure 1). No associations were seen between patient-reported appetite or nausea and DFS (n=20, P=0.297 and P=0.299). Rates of high-risk factors such as increased CA19-9 (71%) and lymph node metastasis (88%) were elevated in patients with BMI <25, while not statistically different from the BMI ≥25 group (P=0.081 and P=0.168, respectively).

Discussion: Preoperative overweight was associated with lower recurrence after resection for dCCA, with no association detected for preoperative appetite or nausea. The positive impact of BMI stands in contrast to the negative role of overweight in other cholangiocarcinoma subtypes, and supports further investigation of a possible link between cancer biology and preoperative weight and symptoms in patients with dCCA.