Gallbladder cancer- risk factors, prognosis and surgical intervention

PhD thesis - Half time review seminar

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Abstract

Background: GBC is, unless discovered at an early stage, a disease with poor prognosis. The overall aim of my PhD project is to optimize preoperative treatment strategies for gallbladder cancer (GBC) patients, with a focus on incidentally diagnosed cancers.

Methods: Data from a register for cholecystectomies (GallRiks) were analysed and linked with a liver and gallbladder cancer registry (SweLiv) and/or the Swedish Cancer Registry. In the first study, preoperative risk factors for incidental gallbladder cancer (IGBC) were analysed. Patients with metastasis or lymphoma in the gallbladder were included in the second study. Patient charts were collected and analysed retrospectively. In the third study, an additive risk score model based on odds ratio from the first study, was created and validated. In our fourth study, we plan to investigate IGBC patients compared to GBC patients concerning risk factors, surgical procedure and survival. In the fifth study IGBC patients will be analysed regarding surgical treatment and survival depending on T-stage during a period of 10 years.

Preliminary Results:

Paper I (published): In total 36,355 patients were included, and 215 patients had IGBC (0.59%). Independent risk factors for IGBC were older age, female sex, previous cholecystitis, and the combination of acute cholecystitis without jaundice and jaundice without acute cholecystitis.

Paper II (submitted): In total metastasis or lymphoma to the gallbladder accounted for 10/225 (4.4%) of the incidental gallbladder malignances. In only two patients a tumor was seen by the surgeon during gross examination of the gallbladder.

Paper III (submitted): A risk score model was created based on preoperative risk factors for IGBC. The AUROC for predicting IGBC showed a good discrimination (0.77) in the validation cohort. The patients were divided into three groups, based on the risk of having IGBC, ranging from 0.14% in the low-risk group to 2.14% in the high-risk group.

Implications: Cholecystectomy on a benign indication is a common procedure, whereas GBC is a rare disease. Early diagnosis in this patient category is of great value and a risk score model can estimate the expected risk for the individual patient and may help to optimize treatment strategies. A liberal approach of sending the gallbladder to histopathological analysis should also be applied.

Publications