Different strategies and outcomes for patients resected for liver metastases from colorectal cancer

Background

Patients with colorectal liver metastases (CRLM) increasingly undergo liver resection. Surgical resection or ablation of all tumours, when feasible, currently offers the only potential for cure. Traditionally, the primary tumour is resected as the first intervention, followed by resection of the liver metastases in a second stage (classical strategy). Another option is preoperative chemotherapy, followed by resection of the liver metastases and resection of the bowel primary at a second stage (liver-first strategy) and the third option is a simultaneous strategy were both the liver and the primary tumour is resected at the same time. Patient selection and drop out from the planned treatment is poorly known and no clear advantage or disadvantage with either of the three strategies in terms of survival has been demonstrated. A repeated hepatectomy is increasingly performed for patients with recurrent CRLM with unknown liver regeneration and patient outcomes.

Questions/methods

1. Why patients scheduled for the liver-first strategy do not complete both liver and primary resections?
2. Compare the liver-first with the classical strategy for patients presenting with synchronous CRLM (sCRLM).
3. Compare the simultaneous strategy with the classical strategy for patients presenting with sCRLM, focusing on patients undergoing major resections.
4. Retrospectively investigate volumetric liver regeneration and survival data after a repeated hepatic procedure (resection or ablation) for recurrent CRLM.

Results

Up to 35% of patients with colorectal cancer and synchronous liver metastases do not complete the planned treatment. No difference in overall survival was found for the different strategies but simultaneous resections appeared to have more complications. Small changes in functional liver volumes were found after two hepatic procedures but with considerable inter-individual variation and patients
selected for a repeated hepatic procedure for recurrent CRLM had an acceptable survival.

**Importance**

When choosing different strategies for sCRLM, patients should perhaps be selected according the treatment logistics, tumour symptoms and surgical feasibility. When patients present with recurrent CRLM, a high variance in liver volume after re-resection can be expected and should be planned for.