Treatment strategies for patients with synchronous colorectal liver metastases

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The traditional approach (TA) to treat patients with resectable synchronous colorectal liver metastases (S-CRLM) is to resect the primary tumor first, followed by chemotherapy and liver surgery.

Sometimes patients undergo liver surgery first thereafter colorectal cancer resection (liver-first approach, LFA). Another less established method includes simultaneous liver and colorectal resection approach (SLCRRRA).

Method
All patients with S-CRLM operated between 2000-2017 at Uppsala University Hospital were reviewed retrospectively grouped into TA, LFA and SLCRRRA. Short and long-term results were investigated.

Results
• Out of 378 patients 28 (7%) were treated with SLCRRRA, 104 (28%) with LFA, and 246 (65%) with TA.
• There was no difference in terms of patient characteristics (age, sex, BMI, ASA).
• Tumor burden was highest for LFA, thereafter TA and SLCRRRA (p=0.003).
• Most common primary tumor localization was ascending colon (54%) in SLCRRRA, rectum (72%) in LFA and descending colon (43%) in TA, p=<0.001.
• SLCRRRA were operated with smaller (p=0.031), less anatomic liver resections (p=0.012), less peri-operative bleeding (p=0.035), and longer operation times (p=<0.001.)
• Complication rates were similar between the groups, but 30-day mortality was higher in SLCRRRA than in TA (p=0.041). Median survival time was 79 months in SLCRRRA, 54 months in TA and 36 months in LFA, p=0.003.

• Total survival remained influenced by treatment approach (p=0.011) adjusting for prognostic factors (ASA p=0.028, number of tumors p=0.001 and postoperative blood transfusion, p=0.001)

Kaplan-Meier curve showing survival after treatment.

Discussion
The choice of treatment approach for R-CRLM may influence patient survival. Tumor burden was smallest in the SLCRRRA, which also had the best overall survival. Survival in the LFA may be influenced by tumor burden, and that all patients did not complete their intended treatment.

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