

Comparative Analysis between Simultaneous Resection and Staged Resection for Synchronous Colorectal Liver Metastases – A Single Center Experience on 300 Consecutive Patients

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Abstract

Introduction: In synchronous colorectal liver metastases (SCLMs), simultaneous resection (SR) of the primary tumor and liver metastases has not gained wide acceptance. Most authors prefer staged resections (SgR), especially in patients presenting rectal cancer or requiring major hepatectomy.

Methods: Morbidity, mortality, survival rates and length of hospital stay were compared between the two groups of patients (SR vs. SgR). A subgroup analysis was performed for patients with similar characteristics (e.g. rectal tumor, major hepatectomy, bilobar metastases, metastatic lymph nodes, preoperative chemotherapy).

Results: Between 1995 and 2016, SR was performed in 234 patients, while 66 patients underwent SgR. Comparative morbidity (41% vs. 31.8%, respectively, $p = 0.1997$), mortality (3.8% vs. 3%, respectively, $p = 1$) and overall survival rates (85.8%, 51.3% and 30% vs. 87%, 49.6% and 22.5%, at 1-, 3- and 5-years, respectively, $p = 0.386$) were similar between the SR and SgR group. Mean hospital stay was significantly shorter in patients undergoing SR than SgR (15.11 ± 8.60 vs. 19.42 ± 7.36 days, respectively, $p < 0.0001$). The characteristics of SR and SgR groups were similar, except the following parameters: rectal tumor (34.1% vs. 19.7%, respectively, $p = 0.0245$), metastatic lymph nodes (68.1% vs. 86.3%, respectively, $p = 0.0383$), bilobar liver metastases (22.6% vs. 37.8%, respectively, $p = 0.0169$), major hepatectomies (13.2% vs. 30.3%, respectively, $p = 0.0025$) and neo-adjuvant chemotherapy (13.2% vs. 77.2%, respectively, $p < 0.0001$). A comparative analysis of morbidity, mortality and survival rates between SR and SgR was performed for subgroups of patients presenting these parameters. In each of these subgroups, SR was associated with similar morbidity, mortality and survival rates compared with SgR (p value > 0.05).

Conclusion: In patients with SCLMs, SR provides similar short-term and long-term outcomes as SgR, with a shorter hospital stay. Therefore, in most patients with SCLMs, SR might be considered the treatment of choice.

Key words: synchronous, colorectal cancer, liver metastases, simultaneous resection, staged resection, chemotherapy