

Meeting abstract

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## Role of surgery in the treatment of liver metastases from colo-rectal cancer in the elderly

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### Aim of the study

Liver metastases from carcinoma of the colon-rectum (CCR) develop in about 50% of patients undergoing resection of primary tumor and about 15–25% of patients had synchronous metastases at presentation. In the absence of surgical treatment, survival 1 year after diagnosis is 30% and is less than 5% at 5 years. The 5-year survival after resection varies from 20 to 54%, while the value of post-operative mortality is currently less than 5%. Resection should be considered for all patients with disease confined to the liver where there is a real possibility of radical resection and maintaining a proper liver function. Currently, the average age of patients undergoing resection is over 60 years. At the same time we are witnessing an expansion of that surgery in patients older than 70 years. This retrospective work is to evaluate whether age may be a limit to liver surgery, and which clinical-pathological factors are predictive of outcome in the medium to long term.

### Materials and methods

140 patients resected for liver metastases from CCR between 1990 and 2007. For statistical purposes, the series was divided into two groups according to age: Group 1  $\geq 70$  years (36/140), group 2  $< 70$  years (104/140). Survival was calculated by the Kaplan-Meier method, differences between variables were estimated by the Log-rank test. Multivariate analysis was applied to analyze independent factors affecting survival. Data

processing was performed using SPSS 13.0 for Windows Evaluation Version (SPSS Inc., Chicago, IL, USA).

### Results

The average age of the whole series was of 61.4 years. Overall, there were 158 major procedures, 12 of which were repeated resections. Metastases were synchronous in 60 cases: 18 patients (50%) of group 1 and 42 (40.4%) in the 2nd group. Co-morbidity occurred in 37 cases: 16 (11.4%) over 70 years and 27 (19.2%) under 70 years ( $p < 0.03$ ). The ASA classification was similar in both groups. The duration of follow-up was  $31.92 \pm 29.6$  months (range: 25–141 months) in the first group and  $41.21 \pm 45.43$  (range: 6–72 months) in the group younger than 70 years.

Type of liver resection, survival and complications: a total of 11 major resection (30.5%) and 25 minor procedures (69.4%) were performed in the first group, and 32 major (29.1%) and 78 minor resections (70.9%) in the second group. Wedge resections was most performed in both groups (30.5% over 70 vs. 35.5% under 70). Peri-operative mortality of the entire series was 1.4% (2 cases both in group 2). The rate of complications was 30.5% in group 1 and 23.1% in group 2 (NS). Long term survival and relapse: liver relapse accounted for 61% of patients in the 1st group (22/36), and 55.8% of the second group (58/104). In one case of the second group (0.96%) relapse involved the lung. Actuarial survival at 1, 3 and 5 years was 68%, 43%, 20.3% for group 1 and respectively

90.6%, 56% and 36.9% for group 2 ( $p = 0.03$ ). Multivariate analysis showed as negative predictive factors: type of resections (major resection), hepatic lymph node involvement, of metastases  $>5$ , and diameter of the lesion  $\geq 5$  cm.

### Conclusion

In this series long term survival was better for young patients. Peri-operative mortality was 2 cases (1.9%) in the 2nd group, and 0 in patients older than 70 years. Most patients had post-operative course without significant morbidity and the rate of complications was similar in both groups. In conclusion age is not a prognostic factor influencing the outcome in the medium term and thus is not a contraindication to resection for liver metastases.

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