FACTORS AFFECTING SURVIVAL IN PATIENTS WITH COLORECTAL CANCER AND LUNG METASTASES

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Background: The incidence of pulmonary surgery for colorectal cancer (CRC) has increased, and currently the reported survival rate is better than in the past. After resection of isolated lung metastases (LMs), more than 30% of patients will survive 5 years, and at least 20% will survive 10 years. After surgical resection, prolonged survival in patients with LMs is comparable to that seen in those with liver resection. Unfortunately, single detector CT-scan was 100% sensitive for LMs as small as 5-6 mm, but also using new generation CT technology 20% of metastatic nodules are not detectable preoperatively. The role of repeated thoracic interventions is less well defined, although patients who underwent multiple pulmonary resections have the same survival as patients undergoing a single pulmonary resection for metachronous CRC. In any case, the goal of resection of LMs is to achieve a complete extirpation of intrathoracic disease without sacrificing excessive amounts of normal lung. In patients with stage IV CRC, Dukes’ stage, lymph-node status, number and location of metastases, and CEA serum levels are usually considered the main prognostic factors (PFs). The aim of this study was to evaluate the relationship between age, size of the LM, and survival in patients with CRC who underwent LM resection.

Methods: Thirty-three patients previously treated for CRC were identified as having isolated LMs and subsequently scheduled for pulmonary metastasectomy. There were 23 (69.7%) male and 10 (30.3%) female patients with a median age of 64 years (range 48-72 years). Age and stage at colorectal operation, size and site of LMs, and operative procedure for pulmonary resection were recorded. The mean disease-free interval from original colorectal operation to first lung resection was 23.1 ± 8.3 months. The Pearson’s correlation coefficient calculation was obtained, and a p-value <0.05 was considered statistically significant.

Results: The mean size of LM was 19.5 ± 9.4 mm, while the overall survival was 19.8 ± 7.9 months (range 10-32 months). As expected, patients with high preoperative serum CEA and Dukes’ stage, and positive lymph nodes (N+) had worse prognosis. There was no relationship (p = NS) between age of the patients and size of the LM (R = -0.11, t = -0.34, p = 0.74), and between age and survival (R = 0.44, t = 1.48, p = 0.17). A significant inverse correlation was found between survival and size of the LMs (R = -0.59, t = -2.07, p = 0.04).

Conclusion: In patients with CRC and LMs who underwent pulmonary metastasectomy the size of metastasis should be considered a sensitive PF in predicting postoperative survival.