Peritoneal recurrence or metastasis in relation to outcome in locally advanced and metastatic gastric cancer

Y. Yang1, J. Wei1, N. Wu1, Y. Zhang2, Q. Wang2, J. Du2, Z. Zou1, B. Liu1
1The Comprehensive Cancer Center of Drum-Tower Hospital, Medical School of Nanjing University & Clinical Cancer Institute of Nanjing University, Nanjing, China
2The Comprehensive Cancer Center Affiliated Drum Tower Hospital to Medical School of Nanjing University & Clinical Cancer Institute of Nanjing University, Nanjing, China

Introduction: The prognosis of locally advanced and metastatic gastric cancer remains dismal. Generally, gastric cancer is considered as systemic disease. The aim of this study is to investigate whether gastric cancer is systemic or regional disease through the exploration of the patterns of recurrence or metastasis of advanced gastric cancer and determination of the factors associated with survival, which may help in identifying effective treatment strategies and establishing future therapeutic prospects considering gastric cancer.

Methods: A retrospective analysis of 349 patients with stage III and IV gastric cancer was performed. The relationships between recurrence or metastasis patterns and clinicopathological characteristics and overall survival were evaluated.

Results: Peritoneal recurrence or metastasis was detected as any part of the metastasis/recurrence pattern in 219 patients, while distant sites were involved in 208 patients. The locoregional area was involved as any part of recurrence or metastasis in 61 patients. In stage III patients, locoregional recurrence were associated with T4 stage; peritoneal recurrence was associated with distal or whole stomach location, diffuse or mixed subtype, and N3 stage; and distant recurrence was associated with intestinal subtype and negative vascular invasion. On multivariate analysis, stage III patients with locoregional recurrence had longer overall survival time than those with peritoneal or distant recurrence (21 vs. 15 months, HR: 0.628, P = 0.047), while stage IV patients with peritoneal metastasis had shorter survival (7.5 vs. 14 months) and a higher risk of mortality (HR: 2.026, P = 0.004).

Conclusion: Peritoneal metastasis appears to be the most common pattern and is associated with poor prognosis in gastric cancer patients. Effective regional treatment is important to guide appropriate further therapy in advanced gastric cancer patient.