Is rectal cancer prone to metastasize to lymph nodes than colon cancer?

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Abstract

The biology of colorectal cancer differs according to its location within the large intestine. A report published in a previous issue of *World Journal of Gastroenterology* (November 2010) evaluated the importance of tumor location as a risk factor for lymph node metastasis in colorectal cancer, and showed that rectal cancer is prone to metastasize to lymph nodes as compared with colon cancer. However, in order to conclude that the tumor location is independently associated with the occurrence of lymph node metastasis, it is necessary to consider a selection bias or other patient- and tumor-related factors carefully.

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TO THE EDITOR

We have read with great interest the article by Wang *et al*^[1] in a recent issue of *World Journal of Gastroenterology* (November 2010). They retrospectively examined 2340 patients with colorectal cancer (stage I - III) who received radical resection between January 2000 and June 2008 at their institution. They showed that the proportion of lymph node positive cases (N+) was higher in the rectal cancer group compared with that in the colon cancer group (41.4% *vs* 35.5%, $P = 0.004$), despite the higher percentage of small or low-grade tumors in the rectal cancer group compared with the colon cancer group. The proportion of N+ cases in their study was close to the Japanese Society for Cancer of the Colon and Rectum (JSCCR) registry data from 1974 to 1993 that we reported previously^[2]; the proportion of N+ cases among stage I to III was 41% (9271/22686) in rectal cancer and 37% (8182/22345) in colon cancer. Furthermore, they showed that the proportion of N+ cases stratified by T stage (T1, T2, and T3-4) was significantly higher in the rectal cancer group than in the colon cancer group ($P < 0.001$). They concluded that rectal cancer is prone to metastasize to lymph nodes as compared with colon cancer. However, there are some major issues about the conclusion and we would discuss them as follows.

The first point is about the selection bias. They excluded R1 or R2 resection, patients who received neoadjuvant chemoradiation, or patients with stage IV cancer.

However, excluding these patients might cause a significant selection bias when testing a hypothesis that rectal cancer is prone to metastasize to lymph nodes as compared with colon cancer.

The second point is about the significance of tumor location in the colon. Previous studies^[3,4], including ours^[5], have shown that patients with distal colon cancers exhibited significantly better survival than those with proximal cancers, suggesting that it might be better to analyze proximal colon and distal colon separately.

Finally, to show that tumor location is independently associated with a higher percentage of lymph node metastasis, multivariate analyses, including patient- (gender, age) and tumor-related factors (pathological grade, tumor size, tumor depth, or lymphovascular invasion^[6,7]) other than tumor location, should be performed.

Although Wang *et al.*'s article addresses important issues, further study is necessary to determine whether rectal cancer is truly prone to metastasize to lymph nodes as compared with colon cancer.

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