

Factors influencing 12 or more harvested lymph nodes in resective R0 of the colorectal cancer

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SUMMARY: Factors that influence 12 or more harvested lymph nodes in resective R0 colorectal cancer.

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The number of lymph nodes required for accurate staging is a critical component in colorectal cancer (CRC). This study was designed to determine the factors that influence the number of harvested lymph nodes (≥ 12) in resective R0 early-stage CRC in a single institution. A total of 100 patients (71.9%) with 12 or more harvested lymph nodes and 39 patients (28.1%) with < 12 lymph nodes were analyzed. The number of harvested lymph nodes was highly variable in patients who underwent resection of R0 CRC. Neither the surgeon nor the pathologist had significant influence on the number of harvested lymph nodes. Therefore, from the viewpoint of the surgeons, disease itself is the most important factor influencing the number of harvested lymph nodes.

KEY WORDS: colon, rectum, cancer, lymph node, harvesting.

Background

The number of lymph nodes required for accurate staging is a critical component in colorectal cancer (CRC). Current guidelines demand at least 12 lymph nodes to be retrieved. Results of previous studies were contradictory about factors influencing the number of harvested lymph nodes. This study was designed to determine the factors that influence the number of harvested lymph nodes (≥ 12) in resective R0 of the Colorectal cancer (CRC) early-stage in a single institution.

Methods

Between July 2005 and December 2008, data on patients who underwent surgery for CRC were analyzed

retrospectively (225). Data for a total of 139 R0-surgery patients were collected and all the tumor-bearing specimens were fixed with node identification performed. Several possible factors that influence 12 or more harvested lymph nodes were investigated and classified into four aspects: (1) operating surgeon, (2) examining pathologist, (3) patient (age, sex, and body mass index), and (4) disease (tumor localization, tumor cell differentiation, tumor stage, type of resection).

Results

A total of 100 patients (71.9%) with 12 or more harvested lymph nodes and 39 patients (28.1%) with < 12 lymph nodes were analyzed. The results demonstrate that within a single institution, tumor localization, depth of tumor invasion according to Dukes stage and grading were independent influencing factors of 12 or more harvested lymph nodes. Neither the operating surgeon nor the examining pathologist had significant influence on the number of harvested lymph nodes.

Conclusions

The number of harvested lymph nodes was highly variable in patients who underwent resection of R0 CRC. Neither the operating surgeon nor the examining pathologist had significant influence on the number of harvested lymph nodes. Therefore, from the viewpoint of the surgeons, disease itself is the most important factor influencing the number of harvested lymph nodes.

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