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Meeting abstract

Sentinel node in colon cancer: a multimodal approach

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Background

Colon cancer staging and prognosis are factors related to nodal status. About 15–20% stage I or II patients develop local recurrences and distant metastases within 5 years despite surgery with curative intent. Sentinel lymph node mapping aims to facilitate staging, to identify any unusual mesenteric lymphatic drainage patterns and to select patients who might benefit from adjuvant chemotherapy.

Materials and methods

Between March and October 2008, 12 patients were enrolled in the study. All of them underwent preoperative colonoscopy. Exclusion and inclusion criteria are summarized in Table 1. One patient was excluded intraoperatively due to the discovery of synchronous colon cancer. The study was thus performed for 11 patients, 5 males and 6 females; mean age was 81 years. Lymph node mapping was performed using the *in vivo* technique at both open (7 patients) and laparoscopic surgery (4 patients), via a subserosal injection of Patent BlueV dye in each quadrant around the tumour. The sentinel lymph nodes are defined as the first one to four blue-stained nodes with the most direct lymph drainage from the primary tumor. The sentinel lymph nodes were examined according to standard hematoxylin-eosin staining; then they were sectioned at 200 μm intervals and examined with immunohistochemistry on cytokeratins.

Results

Detection rate was 90.9%. A mean of 2 sentinel nodes per patient was found. Mean lymph node mapping time was 15 minutes. One case of false negative was discovered. The sensitivity of the multilevel sectioning and immunohistochemistry was 75%; the negative predictive value was 95%. Neither skip metastases nor aberrant drainage were found.

Conclusion

Intraoperative sentinel lymph node mapping is a feasible technique. Cooperation between gastroenterologists, surgeons, anatomopathologists and oncologists are necessary to achieve a correct procedure. Histological upstaging is effective and reliable to define node status and consequently tumour staging and prognosis.

Table 1: Criteria of the study

Exclusion criteria	Inclusion criteria
Rectal cancer	Adults
Synchronous colon cancer	ASA 1–3
Previous colon resections	Colon cancer
Preoperative metastases	Pathological colon polyps
Intraoperative metastases	Patients without metastases
Preoperative pathological nodes	Elective setting
Adverse reaction to the colorant	
Neurological or psychiatric disease	