Acellular Mucinous Lymph Nodes in Colonic Mucinous Adenocarcinoma

CASE REPORT

Abstract

This is an interesting case report on a 72 year old female who underwent an elective right hemicolectomy for a mucinous tumour. Histology revealed 15 lymph nodes with two entirely replaced by mucin without evidence of metastatic tumour cells. The rest of the lymph nodes were normal. After discussion at the local colorectal multidisciplinary meeting these were treated as lymph node metastases and the patient received adjuvant chemotherapy. There is little evidence around the management of colonic carcinoma with acellular mucin evident in lymph nodes.

Keywords
Mucinous adenocarcinoma, Colon cancer, Acellular lymph nodes, General Surgery

Introduction

Mrs R underwent a laparoscopic right hemicolecctomy for a caecal mucinous adenocarcinoma. Histology revealed fifteen lymph nodes with two entirely replaced with mucin without evidence of metastatic tumour cells. After discussion at the local colorectal multidisciplinary meeting these were treated as lymph node metastases and Mrs R received adjuvant chemotherapy.

Case report

Mrs R is a highly independent and functioning 72-year-old woman. She initially presented with lethargy and routine blood panel revealed an iron deficiency anaemia. Colonoscopy showed a caecal malignancy, which on histology was confirmed as adenocarcinoma. Staging CT did not suggest any evidence of metastatic disease. She underwent an elective laparoscopic right hemicolecctomy and had an unremarkable post operative course and was discharged home.

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Histology revealed a mucinous adenocarcinoma infiltrating into the pericolic fat. There was no vascular space or perineural invasion seen. Fifteen lymph nodes were harvested with two entirely replaced by acellular mucin. Despite cutting multiple levels no malignant epithelium was identified. The remaining thirteen lymph nodes were normal.

Following discussion at the colorectal multidisciplinary team meeting it was decided to regard the mucin in the lymph nodes as malignant deposits. After consultation with Mrs R she was treated with adjuvant chemotherapy.

Discussion

Colorectal carcinoma is a major cause of morbidity and mortality in the western world. Production of mucin may be a pathological indicator of prognosis and risk of local recurrence.[1, 2] Mucinous adenocarcinoma of the colon make up 11-15% of cases of colorectal cancer. [2] A risk factor for lymph node metastasis in colon cancer is the depth of invasion. [10]

Poor survival following apparently successful surgical resection in lymph node negative patients has been attributed to occult micrometastases. [3, 5] The MUC2 mucin gene has been associated with micrometastases. Bernini et al. looked at resected lymph nodes and found MUC2 expression in as many as one third of lymph nodes without pathologically detected metastases. [3] A similar pattern has been seen with breast, bladder and squamous cell carcinoma of the oesophagus with polymerase chain reaction (PCR) and newer RNA staining techniques finding previously undetected metastases. [4-7] This case could represent this phenomenon, however RNA staining for MUC2 genes is not available at our institution.

Shia et al. reviewed 108 cases of mucin pools in rectal carcinoma following neoadjuvant chemoradiotherapy, concluding the finding of acellular mucin pools does not impact disease free survival and should not be considered residual disease. [8] The College of American Pathologists states that acellular mucin pools should not constitute residual tumour in TNM staging for rectal cancer but again the population referred to have undergone neoadjuvant treatment. [9] Neoadjuvant treatment is not recommended in patients with colonic cancer such as in Mrs R’s case.

As there is little evidence around the management of colonic carcinoma with acellular mucin evident in lymph nodes, the decision was made to treat as if there were metastases to the nodes and adjuvant chemotherapy was commenced. There may be some evidence that reverse transcriptase PCR staining for MUC2 genes if available could be useful in this subset of patients.
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References


