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LETTER TO THE EDITOR

Unexpected liver failure after right hemihepatectomy for colorectal liver metastasis due to chemotherapy-associated steato-hepatitis: time for routine preoperative liver biopsy?

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Dear Editor:

The introduction of modern chemotherapy regimens, such as oxaliplatin and irinotecan, has led to significant improvements in the survival of patients with colorectal liver metastases. However, this new generation of agents is associated with adverse events, such as chemotherapy-associated steato-hepatitis (CASH). Until now, only sporadic reports of CASH could be found in the literature.

We would like to describe the case of a 55-year old man who underwent a left hemicolectomy for nodal negative colonic adenocarcinoma. Five years after the initial operation, the patient developed a solitary liver metastasis in segments I/VII of the liver. He received 10 cycles of chemotherapy with 5-FU, folinic acid, and irinotecan over a period of 6 months, followed by bevacizumab. After a 3-month interval, he presented to undergo surgical resection. The solitary tumor involved segments I/VII and infiltrated both the right portal and the right hepatic veins. Preoperative evaluation calculated a remnant volume of 720 ml for the left hemiliver, presumably enough for a person of his weight (90 kg). Our patient underwent a right hemi-hepatectomy with resection of segment I and of the right portal vein. He received six units of packed red cells and underwent a Pringle maneuver for 37 min. The postoperative course was remarkable for liver insufficiency, characterized by III°–IV° encephalopathy and peak bilirubin levels of 8 mg/dl. Prothrombin time remained within the normal rage. Moderate doses of vasopressors were required to maintain hemodynamic stability. Creatinine values remained below 2 mg/dl. The encephalopathy and hyperbilirubinemia improved with six sessions of plasmapharesis. The patient was able to leave the intensive care unit on postop day 32 and was discharged on day 52. Microscopic pathology revealed 60% macrovesicular steatosis.

The presence of vascular and steatotic changes in patients treated with chemotherapy can be a source of morbidity and mortality at the time of resection of liver metastases. In our case, although the remnant liver volume (720 ml) after the hemi-hepatectomy was theoretically adequate (body mass index of 26), and the postoperative synthetic function of the liver remained within normal range, the patient developed a severe encephalopathy that only resolved with plasmapheresis. We hope that our report will serve as a reminder of the risk of CASH and as a guide to the consideration of routine preoperative liver biopsies.

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