

# Hepatic injury in patients with colorectal liver metastasis in Thailand

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## ABSTRACT

**Objective:** The treatment of colorectal liver metastasis is surgical resection. The chemotherapy can convert unresectable lesions to resectable lesions. However chemotherapy also causes liver injuries in remaining liver parenchyma, such as steatosis, steatohepatitis and sinusoidal dilation. These lesions cannot be distinguished from other causes, including nonalcoholic fatty liver disease (NAFLD) and nonalcoholic steatohepatitis (NASH). Steatosis and steatohepatitis are associated with obesity, which is commonly found in general population. This study aimed to assess the factors that are related to liver injury in patients with colorectal liver metastasis.

**Methods:** Patient underwent hepatic resections for colorectal liver metastasis from 2006-2013 were included. Demographic and clinical data were collected. Histologic changes of liver injury including steatosis, steatohepatitis, sinusoidal dilation, fibrosis, and nodular regenerative hyperplasia were retrospectively reviewed.

**Results:** The study included 92 patients. There were 44 cases who received preoperative chemotherapy. From multivariate analysis, obesity (BMI  $\geq 25$  kg/m<sup>2</sup>) was the only factor associated with liver injury (P 0.011, odds ratio = 4.18). However other factors including preoperative chemotherapy, underlying diseases, age and sex, were not associated with liver injury.

**Conclusion:** In this study, obesity is the only associated factor of liver injury in the patients with colorectal liver metastasis.

**Keywords:** Obesity, liver injury, colorectal carcinoma, liver metastasis, chemotherapy