

Modified Pringle Maneuver for Laparoscopic Liver Resection

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ABSTRACT

Background. The Pringle maneuver is widely used in liver surgery to reduce intraoperative blood loss.¹ However, total vascular inflow occlusion is frequently associated with ischemia reperfusion injury leading to postoperative liver dysfunction and impaired recovery.^{2–4} We describe herein an original procedure of modified Pringle maneuver (MPM) during laparoscopic liver resection with selective clamping of hepatic arterial inflow.

Methods. Of 183 laparoscopic major hepatectomies performed at the Institut Mutualiste Montsouris between January 1998 and March 2014, 19 patients required vascular clamping, and MPM was used in 6 patients. The video showed this procedure in a 58-year-old woman with multiple colorectal liver metastases planned for laparoscopic right trisectionectomy. After the division of the right hepatic artery and the right portal vein, the parenchymal transection was performed with 12 mm Hg of pneumoperitoneum pressure using MPM in order to control the bleeding.

Results. The total operative time was 187 min and estimated blood loss was 70 ml. A right trisectionectomy were performed successfully with a purely laparoscopic procedure. After an uneventful postoperative recovery, the

patient was discharged on the fifth postoperative day. Among 6 patients in whom this technique was applied, only one patient experienced grade II postoperative liver failure according to Clavien–Dindo classification.

Conclusions. Selective clamping of hepatic arterial inflow may be a preferred surgical strategy for high-risk patients, with elective application of this maneuver preemptively in all cases where excessive bleeding is anticipated.

CONFLICT OF INTEREST The authors declare no conflict of interest

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