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### Factors Affecting Intraoperative Blood Loss during Liver Resection

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#### Abstract

**Objective:** Liver resection might be associated with significant blood loss and required blood transfusion. Many strategies were introduced to reduce blood loss during liver resection. Central venous pressure (CVP) was considered one of the factors affecting blood loss. The objective of the present study was to evaluate the factors correlated with blood loss during liver resection surgery including CVP.

**Material and Method:** Between July 2008 and July 2010, medical and anesthetic records of patients who were admitted to King Chulalongkorn Memorial Hospital for more than one segment resection of the liver were retrospectively reviewed. Factors potentially affecting blood loss including patient characteristics, surgical aspects, and anesthetic aspects in particular CVP were analyzed by regression analysis to explore the correlation with intraoperative blood loss.

**Results:** One hundred thirteen patients were included and analyzed. The mean intraoperative blood loss was  $836.46 \pm 762.85$  ml. The mean, maximum, and minimum values of CVP measured during liver resection were  $7.36 \pm 3.26$ ,  $11.17 \pm 3.81$ , and  $5.10 \pm 2.81$  mmHg, respectively. On multiple regression analysis, the operative time and male patients were associated with blood loss. The other factors and CVP were not significantly correlated.

**Conclusion:** The present study suggested that operation time and gender were the predictors of intraoperative blood loss in more than one segment resection of the liver. In addition, CVP was not the important factor in predicting blood loss.

**Keywords:** Liver resection, Blood loss, Factor, CVP

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