

Christos Stravodimos

Dr. med

30- and 90-day mortality after liver resection

Risk stratification of 1796 cases

Fach/ Einrichtung: Chirurgie

Doktormutter: Frau Prof. Dr. med. Katrin Hoffmann

Over a long period of years, liver surgery was associated with a high complication rate. Nowadays liver resection performed in high volume academic centers resulted to lower mortality rates due to the higher case load and the better peri-operative care.

Aim of this study was to evaluate mortality and the variables associated with surgical outcomes of hepatectomy. Data of 1796 patients who underwent a liver resection at the Department of General and Transplantation Surgery, at the University of Heidelberg between 2001 and 2013 were analysed. The primary points were the 30-day and the 90-day mortality.

A uni-variate analysis was performed to evaluate and describe the patient's characteristics and the risk profile while a multi-variate analysis was performed to predict the post-operative mortality.

Among the analyzed population the 30- and 90-day mortality rates were 3.0% and 4.5% respectively. Male patients were associated with impaired 30-day and 90-day survival (p-value 0.0007 and 0.0073 respectively). Patients older than 60 years were also associated with impaired 30-day and 90-day survival (p-value 0.0153 and <0.0001 respectively). Patients with comorbidities leading to ASA III/IV classification were identified as a high-risk group with impaired 30-day and 90-day survival (p-value <0.0001 and p-value <0.0001 respectively),

as well as patients undergoing extended resection for primary liver tumours (p-value 0.0006 and <0.0001 for 30-day and 90-day mortality respectively). In Conclusion male patients older than 60 years with comorbidities leading to ASA III/IV classification undergoing extended resection for primary liver tumours were identified as a high risk group.

The several different scoring systems failed to predict the morbidity and mortality after elective liver surgery. Therefore in order to improve the quality and for an adequate counselling for the patients, every hepato-biliary unit should assess their quality of care based on their own dataset. Based on the gained results the internal guidelines should be adapted accordingly. The developed risk model for hepatectomy in our analysis should help to improve the internal quality control regarding patient related factors and procedure-specific variables, which have direct influence on the perioperative outcome. With that, an adequate counseling to the patients as part of shared decision making process with all medical team members might be possible.