

Comparison of liver resection technique in terms of operative outcome

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Introduction: Liver resection is one of the most difficult and challenging operations in general surgery. Blood loss is the most important factors affecting the outcome. Various techniques have been used to reduce blood loss, including methods of liver parenchymal transection. These include the ultrasonic dissection using the Cavitron ultrasonic surgical aspirator (CUSA) and Kelly's clamp technique.

Materials & Methods: This study compared CUSA and Kelly's clamp crush technique as liver parenchymal transection in respect to: parenchymal transection time, intraoperative blood loss, peri-operative blood transfusion, postoperative morbidity, length of hospital stays and mortality. The study was conducted in the Department of General Surgery, PGIMER, Chandigarh, India from January 2010 to Dec 2011.

Results: Forty patients were included in the study. The demographic profile, co morbidities pattern, preoperative liver function tests, surgical indications and surgical procedures in the two groups were comparable. Mean parenchymal transection time was 1.9 ± 0.80 hrs (range 1.33 hrs to 4 hrs) with CUSA and 0.89 ± 0.35 hrs (range 0.353 hrs to 1.5 hrs) with Kelly clamp (p-0.001). Blood loss in CUSA was 395 ml (range 150 to 550 ml) and in Kelly clamp was 275 ml (range 50 to 1000 ml) (p-0.249). The mean liver resection speed in CUSA was 0.4934 cm²/hr (range 0.24 to 0.91 cm²/hr) and in Kelly clamp was 1.0681 (range 0.40 to 1.60 cmsq/hr) (p-0.001). Total 8 patients developed complications, 5 in the CUSA and 3 in the Kelly clamp group. The hospital stay was 16.8 days in CUSA and 8.6 days in Kelly clamp (p-0.04). There was no significant statistical difference of liver function tests (p-0.019). There was no mortality.

Conclusion: Kelly clamp crush technique for liver parenchymal transection may be better than CUSA technique.

Biography

Lileswar Kaman did his general surgical residency from the Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh, India. At present he is working as additional Professor and attending Surgeon, General Surgery at PGIMER, Chandigarh, India which is a tertiary university hospital. His main interest has been Hepatobilliary Pancreatic and Liver Transplant Surgery. He has published 45 papers in reputed pubmed indexed journals and serving as an editorial member and reviewer in various medical journals.

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