

Efficacy of fibrin glue spray and polyglycolic acid sheet for the protection of transection surface after liver resection.

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Abstract:

Introduction: Prophylactic abdominal drainage, in order to detect intra-abdominal hemorrhage or bile leakage and to drain fluid collection in abdominal cavity for the patients with liver resection, has been performed routinely. To insert abdominal drain, however, may be associated with some complications, such as increased rates of intra-abdominal and wound infection, abdominal pain, and abdominal fluid loss. Therefore, the prophylactic drainage after liver resection is still controversial.

Methods: This study aimed to investigate the efficacy of fibrin glue spray and polyglycolic acid sheet for the protection of transection surface after liver resection and explore the possibility of liver resection without prophylactic drain placement. Fifty two patients who underwent elective liver resection between May 2010 and August 2011, were divided into two groups, control group (N = 14) and fibrin glue/ polyglycolic acid sheet group (treatment group) (N = 38). Peri-operative factors, including total abdominal drainage volume, blood biochemical examination data, post-operative complications, and post-operative hospital stay, were compared between the two groups. **Results:** There was no difference between the two groups in pre-operative factors. Significant difference was observed in serum albumin level at post-operative day 1 (control group vs. treatment group; 2.48 vs. 2.75 P = 0.024) between the two groups. Total abdominal drainage volume (498 ml vs. 324 ml), severe complication rate (Clavien's grade IIIb or higher, 35.7% vs. 13.2%), and post-operative hospital stay (18 days vs. 15 days) are tend to be decreased in the treatment group. **Conclusion:** Use of fibrin glue spray and polyglycolic acid sheet for the protection of transection surface appears to be safe, and tend to reduce fluid volume of abdominal drainage and severe post-operative

complications, resulting in preventing hypoproteinemia. So it will be feasible to perform liver resection without prophylactic drainage by using this treatment.