

Prevention of pleural effusion after hepatectomy using fibrin sealant.

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Abstract:

Retention of pleural effusion after hepatectomy is an important complication that may affect the postoperative course. However, there are few reports on its pathogenesis or preventive measures. We evaluated the mechanism of the development of this complication and preventive measures against it. During the past 4-year period, hepatectomy was performed in 77 patients, of whom 64 underwent liver mobilization by transecting the hepatic ligaments. A fibrin sealant was sprayed on the cut surface of the hepatic ligaments in randomly selected 25 of the 64 patients to determine whether this application can prevent postoperative retention of pleural effusion. Post-operative pleural effusion was not observed in any patient treated by fibrin sealant spraying but was observed in 13 (30%) of the other 39 patients treated with this sealant ($p < 0.05$). In addition, none of the 23 patients in whom the liver was not mobilized during hepatectomy showed postoperative pleural effusion. These results suggest that severance of the hepatic ligaments is a major cause of pleural effusion, and application of a fibrin sealant to the undersurface of the diaphragm around the insertion of the liver ligaments is useful for preventing this complication.