

# **The use of fibrin sealant patches in the operative management of liver trauma: Experience of a UK major trauma centre.**

Authors: Reilly J.-J., MacGoey P., Kalogeropoulos G., Navarro A., Brooks A.

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## **Abstract:**

**Introduction:** The injured haemorrhaging liver remains a significant challenge for the modern surgeon. Effective adjuncts to haemostasis are therefore desirable. The evidence for the use of intra-cavity haemostatic agents is sparse with existing evidence derived from animal models and case reports. This study aims to review hepatic trauma outcomes where fibrin sealant patches have been employed. **Methods:** Data from liver-injured patients presenting from June 2009-November 2014 was examined retrospectively. Patients were identified and clinical outcome data obtained from the East Midlands Major Trauma Centre's prospectively maintained database and the United Kingdom National Trauma Audit and Research Network (TARN). **Results:** Twenty patients were identified where fibrin sealant patches were employed during surgery for liver trauma. 13 of 20 patients had high-grade injuries (American Association for the Surgery of Trauma grades III-VI). In-hospital mortality was 0%. The bile leak rate was 10% (n = 2), with one patient requiring ECRP. 1 patient had an unplanned return to theatre due to bleeding, and 1 patient required laparotomy for a sub-hepatic abscess. **Discussion:** Operative management of liver injuries is associated with high mortality. Historical series reported mortality rates of 10-42% and most modern series of operatively managed high-grade injuries report mortality rates in excess of 50%. We have utilised fibrin sealant patches at primary and re-look laparotomy and as an adjunct to both packing and haemostatic suturing, including following resectional debridement and anatomical resection. In this small series of severely injured patients its use was associated with extremely low morbidity and mortality.