Prevention of subcutaneous seroma formation in open ventral hernia

repair by using a new lowthrombin fibrin sealant.

Authors: Kohler G., Koch O., Emmanuel K.

Publication Date: 2014

Abstract:

Background: Seroma formation is a frequent postoperative complication following open ventral

hernia repair (OVHR), especially in cases requiring wide subcutaneous dissection (WSD). The aim

of this study was to evaluate the effectiveness of a new low- thrombin fibrin sealant for seroma

prevention. Methods: Twenty consecutive patients with median incisional hernias who required

OVHR with WSD > 100 cm² were included in the study. Ten patients comprised the

fibrin glue group (FG) and received either a sublay mesh or an open intraperitoneal onlay mesh

(IPOM) repair with ventral fascial closure, as well as a subcutaneous application of low-thrombin

fibrin sealant. This cohort of patients was compared to a control group (CG) of 10 consecutive

patients undergoing previously OVHR without prevention of seroma formation with regard to

outcome measures such as seroma formations, wound complications, seroma aspirations or

unplanned re-operations, and length of hospital stay. Results: Though the median extent of

subcutaneous dead space was larger in the FG than in the CG (266 vs. 174 cm²; p =

0.012) seroma formation occurred in none of the FG vs. 4 of the CG patients (p = 0.003).

Postoperative complications occurred in 1of the FG vs. 4 of the CG patients (p = 0.05). Three

patients of the CG and none of the FG required a re-operation within 30 days (p < 0.001).

Conclusions: The use of a new low-thrombin fibrin glue demonstrated a protective effect against

formation of seromas and decreased the rate of wound complications in OVHR.