Strategies for Mesh Salvage after Skin and Soft Tissue Infection in Veterans Undergoing Ventral Hernia Repair with Mesh

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INTRO

- Skin and soft tissue infection following ventral hernia repair with mesh is a dreaded complication
- This study aims to assess the 5-year incidence of SSTI and effects of antibiotics and debridement on mesh salvage

METHODS

- Includes Veterans undergoing prosthetic mesh-reinforced ventral hernia repair during 2008-2013
- SSTI exposure includes 30d VASQIP-assessed SSI and those after 30d detected by an artificial network model
- SSTI probability > 75% defined as cases, <25% as controls, others excluded
- Outcome was mesh explantation within 5 years, defined by CPT codes and chart review
- SSTI vs. control groups balanced using propensity score with inverse probability of treatment weighting; hazard ratio estimated with Cox proportional hazards model

RESULTS

- Study population: 2,715 surgeries
- Mean age 59.8, 97.2% male
- SSTI incidence: 22.5% (612/2,715)
- Explantation rate: 3.4% (92/2,715)
- HR of SSTI: 56.3 (20.0-158.6)
- HR of 31-60d of antibiotics (ref. <3d): 0.15 (0.07-0.34)
- HR of 1 debridement (ref. none): 13.4 (7.1-25.2)

CONCLUSIONS & IMPLICATIONS

- Most SSTIs resolved and no explantation was performed
- Antibiotic therapy is associated with salvage

Most patients with SSTI following ventral hernia repair resolved the infection and did not undergo explantation.

Antibiotic therapy was associated with preventing progress to mesh explantation.