The use of an acellular porcine dermal collagen implant in the repair of complex abdominal wall defects: a European multicentre retrospective study

Medtronic provides the following synopsis of a clinical publication involving Permacol™ Surgical Implant.

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PRODUCT DISCUSSED: Permacol™ Surgical Implant

PURPOSE OF THE STUDY
To evaluate clinical outcomes of complex abdominal wall repair (CAWR) with Permacol™ surgical implant.

METHODS
• Retrospective study of CAWR in patients from 7 European sites who were treated with Permacol™ surgical implant for ventral or incisional hernias, not including parastomal, inguinal, or hiatal repairs. All repairs were performed by open approach
• 109 patients (56 males and 53 females) who met the ≥ 1 year follow-up criteria were included; median follow-up was 720 days (range 368–2857)
• Hernia recurrence was the primary outcome; adverse events were also documented†

RESULTS
• At baseline:
  - Median age was 64 years (34–91), median comorbidities was 2 (0–6), and median BMI was 29.6 (17.6-55.2)
  - 36 (33.0%) patients had undergone at least 1 prior repair, 10 (9.2%) of whom had an infected mesh as a result
  - CDC wound classification of patients were 37 (33.9%) Class I, 43 (39.4%) Class II, 21 (19.3%) Class III, and 8 (7.3%) Class IV patients*
  - Most common postoperative adverse events were wound infection (15, 13.8%) and seroma (18, 16.5%)
  - Overall recurrence rate within 24 months was 20/109 (18.3%)
  - Within 2 years, recurrences by repair technique were: 1/12 (8.3%) for inlay, 10/30 (33.3%) for onlay, 3/24 (12.5%) for sublay, and 6/43 (14.0%) for intraperitoneal
  - Fascial closure was achieved in 74 (69.2%) cases; multivariate analysis showed that patients with fascial closure had a significantly lower rate of recurrence of 5.4% (4/74) at 12 months compared to those without closure at 18.2% (6/33), P = 0.049
  - No comorbidities impacted recurrence rate at 12 or 24 months

OVERALL RECURRENCE RATE

81.7% of cases had no recurrence within 2 years.

CONCLUSION
Complex abdominal wall repair with Permacol™ surgical implant has a relatively low risk of recurrence and complications. This evidence supports fascial closure as key for reducing recurrence in these repairs.

† Minimum of 12 month follow-up
* Use of Permacol™ surgical implant in a contaminated or infected field may lead to a weakening or breakdown of the implant. Treat any existing or suspected infection according to accepted medical practice before implanting the device

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12/2016 - 16-eu-clinical-summary-giordano-en-ext-1473229