

Is Porcine Acellular Dermis an Effective Alternative for Abdominal Reconstruction after Pedicled Transverse Rectus Abdominis Myocutaneous Flap Breast Reconstruction?

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Abstract

Background: Approximately 70,000 women in the United States annually undergo breast reconstruction after mastectomy; with the pedicle TRAM flap still a popular choice for these patients. It has been reported that approximately 8% of patients who undergo a pedicle TRAM flap procedure develop an abdominal hernia or bulge. In our department, the use of bioprosthesis such as Permacol to aid in the closure of anterior rectus fascia defect has become a popular method employed to reduce this occurrence. We examined the efficacy of Permacol in reducing abdominal hernias and bulges postoperatively in pedicle TRAM flap patients. (1-3)

Methods: Through retrospective chart review, data was collected on 44 patients who had undergone a pedicle TRAM flap procedure in the last 15 years, 21 having received Permacol placement and 23 having undergone primary closure without the use of overlay grafts. Data included age, BMI, race, comorbidities, surgical details, complications, and average follow-up, among others. Using statistical analyses, we compared the rate of complications between patients who underwent primary closure and those who received Permacol placement.

Results: Average patient age was 50.14 in the Permacol group and 51.43 in the primary closure group. Average BMI was 29.86 in the Permacol group and 28.87 in the primary closure group. There was no significant difference in either race or comorbidities. We found no significant differences in any complications between groups, most importantly with respect abdominal hernias and bulges (Figure 1). There was also no difference in the occurrence of abdominal complications between patients who had undergone previous abdominal surgery and those who did not (Figure 2).

Rate of Abdominal Complications vs. Reinforcement

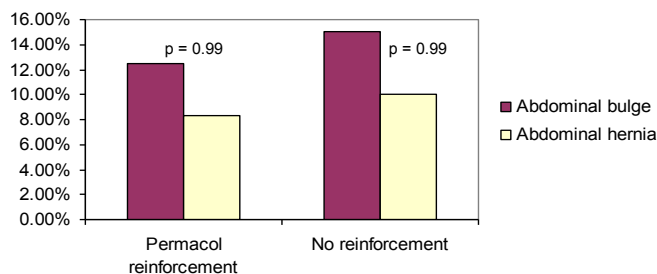


Figure 1. No significant difference in occurrence of abdominal bulge or hernia postoperatively in patients who received Permacol compared to those who received no reinforcement.

Rate of Abdominal Complications vs. Previous Abdominal Surgery

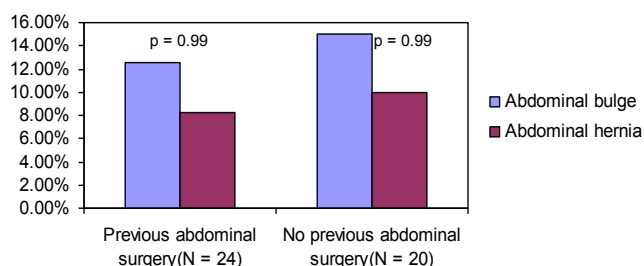


Figure 2. No significant difference in occurrence of abdominal bulge or hernia in patients who had previous abdominal surgery compared to those who did not.

Conclusions: We conclude that Permacol does not provide the abdominal strength necessary for most patients to maintain abdominal wall laxity, regardless of previous abdominal surgery. Also, previous abdominal surgery does not increase the occurrence or abdominal complications.

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