

PORCINE DERMIS GRAFT ENHANCES APICAL SUSPENSION FOR POST-HYSTERECTOMY VAGINAL PROLAPSE REPAIR

Hypothesis / aims of study

This study presents our preliminary experience with the use of porcine dermis grafts (PDG) in the performance of abdominal vaginal cuff suspension at the time of post-hysterectomy prolapse repairs.

Study design, materials and methods

We reviewed the charts of all private practice patients seen by the Division of Female Pelvic Medicine and Reconstruction Surgery who had undergone abdominal repair of post-hysterectomy vaginal prolapse, by laparotomy or laparoscopy, from 07/01/2002 through 01/16/2006. 27 post-hysterectomy patients with vaginal apex prolapse who had undergone a vaginal cuff suspension, with or without concomitant anterior or posterior vaginal repair, were included in the study. The demographics, preoperative and postoperative examination data, and intraoperative findings were recorded

All patients underwent either a high uterosacral fixation (USF) or a sacrocolpopexy (SCC) when the uterosacral ligaments were deficient. The initial 12 patients had not received PDG and were designated as group A. PDG was sutured to the intra-abdominal side of the unopened vaginal cuff prior to apical suspension in the subsequent 15 patients, and these patients were designated as group B. In group B, 5 patients had polypropylene mesh sutured over the PDG and extended to the sacrum, and 3 patients had PDG alone extended to the sacrum. Postoperative failure was defined as apical prolapse equal to or greater than stage II. Postoperative vaginal mesh erosions were noted. Comparisons were made between groups A and B for demographics, prior history, preoperative findings, concomitant surgeries, median follow-up and postoperative findings using Fisher exact test.

Results

There were no significant differences in demographics and prior history between the two groups. Preoperatively, fewer patients in group A had stage II or greater anterior prolapse compared to group B (42% vs. 87%, $p = 0.019$). Intraoperatively, 15 patients (8 in group A and 7 in group B) had undergone USF ($p = 0.259$), and 12 patients (4 in group A and 8 in group B) had undergone SCC ($p = 0.259$). There was no significant difference between groups A and B in the use of concomitant paravaginal repairs (58.3% vs. 86.7%, $p = 0.11$).

Median follow-up was longer in group A (25.0 vs. 8.9 months, $p = 0.0056$), due to the more recent introduction of PDG into our practice. There was no significant difference in the overall postoperative failure rate of group A versus B (25% vs. 0%, $p = 0.075$). However, of the patients who underwent USF, there was a higher postoperative failure rate in group A (75% vs. 0%, $p = 0.024$). There were no failures of SCC in either group. There were significantly more mesh erosions in group A than B (75% vs. 0%, $p = 0.018$).

Interpretation of results

With the USF technique, the PDG may maximize the success of the procedure. With the SCC technique, the PDG may prevent mesh erosions at the vaginal apex, and it does not appear to compromise effectiveness.

Concluding message

This study suggests that PDG placed at the time of abdominal repairs for post-hysterectomy vaginal prolapse may lower the complication rate of vaginal apex suspensions. Although the number of patients in this preliminary study was small, it appears that further investigation in randomized controlled trials is warranted.

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CLINICAL TRIAL REGISTRATION: This clinical trial has not yet been registered in a public clinical trials registry.

HUMAN SUBJECTS: This study was approved by the Institutional Review Board, Albert Einstein College of Medicine and followed the Declaration of Helsinki. Informed consent was not obtained from the patients.