Transvaginal Repair of Peritoneal Cavity to Vaginal Fistula Utilizing a Next-Generation Decellularized Dermal Allograft (DermaPure®)
R. Keith Huffaker, MD, MBA, FACOG

Surgical Summary

Presentation:
36-year-old female, with a history of a transabdominal hysterectomy several months prior (per another provider), presented in the clinic complaining of persistent bleeding per the vagina.

Preoperative Diagnosis:
• Delayed vaginal cuff wound healing status post transabdominal hysterectomy

Postoperative Diagnosis:
• Delayed vaginal cuff wound healing status post transabdominal hysterectomy
• Enterocele with fistula from peritoneal cavity to vagina

Procedure:
• Transvaginal repair of fistula existing from peritoneal cavity to vagina with excision of fistula tract
• Enterocele repair & placement of DermaPure®, a decellularized dermal allograft
• Cystourethroscopy

Intra-Operative Implantation of DermaPure:

Outcome:
• Cystourethroscopy revealed no trauma to bladder or urethra following fluid drainage during dissection; determined to be peritoneal fluid
• Use of the graft allowed for additional tissue layer between peritoneal closure and vaginal closure to reduce chance of persistent drainage tract/fistula
• Patient reported marked improvement and doing well 6 weeks post procedure

Surgeon Perspective:
"Use of DermaPure along with Veronikis Vaginal Retraction System™ allowed a minimally invasive vaginal approach and avoidance of abdominal approach for a positive surgical and patient outcome"
– R. Keith Huffaker, MD, MBA, FACOG
Transvaginal Repair of Peritoneal Cavity to Vaginal Fistula Utilizing a Next-Generation Decellularized Dermal Allograft (DermaPure®)

R. Keith Huffaker, MD, MBA, FACOG

Case Report

Presentation:
36-year-old female, with a history of a transabdominal hysterectomy several months prior (per another provider), presented in the clinic complaining of persistent bleeding per the vagina.

Assessment:
Clinical examination revealed granulation tissue and delayed wound healing at the vaginal apex.

Intraoperative Findings:
- The patient was found to have an enterocele with fistula tract draining from peritoneal cavity to the vagina at the vaginal apex midline.
- A 2mm, small area of granulation appearing tissue present.
- During excision of this granulation appearing tissue, there was return of fluid suspicious for urine.
- Further extensive exploration of this area following drainage of the bladder, revealed a fistula tract coursing to the peritoneal cavity.

Surgical Treatment:
- The patient was taken to the operating room, placed in dorsal supine position and administered general endotracheal anesthesia.
- Placed in Yellowfin leg holders, prepped and draped for vaginal and abdominal procedure. The bladder was drained.
- The Veronikis Vaginal Retraction System™ was placed with placement of stay sutures.
- Sharp dissection circumferentially extending approximately 1.5 – 2.0 cm around the site.
- Entry into peritoneal cavity was determined following normal cystourethroscopy.
- Excision of tissue surrounding the fistula tract was accomplished. 2-0 Vicryl was used in purse string fashion to close the enterocele incorporating peritoneum and sub-epithelial vaginal tissue.
- Approximately 2 x 4 cm segment of DermaPure®, a decellularized dermal allograft was inlaid overlying the fistula tract and secured to the sub-epithelial vagina in a longitudinal fashion with 2-0 Vicryl suture, ensuring that the allograft lay flat.
- Vaginal epithelium was closed in running locking fashion in midline longitudinal fashion over the allograft.
- Premarin cream and vaginal packing were placed.

Conclusion:
- Intraoperative cystourethroscopy revealed no trauma to bladder or urethra following fluid drainage during dissection; fluid ultimately was noted to be peritoneal fluid.
- 6-week follow-up revealed appropriate healing with minimal discharge; patient reported improvement & doing well.
- Use of the DermaPure allowed for additional tissue layer between peritoneal closure and vaginal closure to reduce chance of persistent drainage tract/fistula.
- Use of the DermaPure along with Veronikis Vaginal Retraction System™ allowed minimally invasive vaginal approach and avoidance of abdominal approach.

DermaPure® Decellularized Dermal Allograft

<table>
<thead>
<tr>
<th>Reference</th>
<th>Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>030400HD</td>
<td>3 cm x 4 cm</td>
<td>DermaPure Decellularized Dermal Allograft</td>
</tr>
<tr>
<td>040600HD</td>
<td>4 cm x 6 cm</td>
<td>DermaPure Decellularized Dermal Allograft</td>
</tr>
<tr>
<td>071000HD</td>
<td>7 cm x 10 cm</td>
<td>DermaPure Decellularized Dermal Allograft</td>
</tr>
</tbody>
</table>