

# Posterior Repair with Repliform<sup>®</sup> Tissue Regeneration Matrix

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Tissue Regeneration Matrix

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## Introduction

For posterior repair (Repliform Tissue Regeneration Matrix) in patients as a secondary rectocele or primary rectocele with a large rectovaginal fascial defect. This may include concomitant splinting (application of perineal pressure with defecation) or digitations (placing a finger into the vagina during defecation to assist passage of faeces).

## Procedure Overview

A rectocele is the protrusion or herniation of the posterior vaginal wall. The degree of protrusion can vary from patient to patient. The severity of rectocele can range from minimal protrusion to protrusion of the posterior vaginal wall beyond the level of the introitus. Contributing factors may include weakening or tearing of the rectovaginal fasciae. Common presenting complaints may include the feeling of a vaginal bulge, constipation or poor evacuation of stool. Rectocele is often not an isolated change. Anterior compartment prolapse and enterocele may be concomitant. Individual defect and symptomatology will influence procedure selection.

## Surgical Technique

### SITE PREPARATION AND DISSECTION

**Step 1:** The patient will fast overnight and an enema is administered the morning of the surgery.

**Step 2:** Broad-spectrum intravenous antibiotics are administered prophylactically to cover E.coli and anaerobes. My preference is UNASYN<sup>®</sup> (Ampicillin sodium/Sulbactam sodium) 3.0 grams q 6 hours initiated 1 hour prior to surgery.

**Step 3:** An O'Connor drape is used to allow for concomitant vaginal surgery with continuous sterile access to the rectum with the gloved finger. Any other drape is allowable if it affords this dual access.

**Step 4:** The vaginal width is measured with the surgeon's dominant hand. In sexually active women before or after menopause we hope for a 2 1/2 to 3 fingers breadth vaginal width preoperatively and only marginal narrowing after surgery. Using these parameters helps to prevent dyspareunia.

**Step 5:** A digital rectal exam is performed to delineate the length and width of the rectovaginal fascial defect and to detect unforeseen enterocele.

**Step 6:** Three Alice clamps are placed on the perineum in a triangular configuration. The Alice clamp placed at the apex of the triangle should be placed 4 centimeters from the base of the triangle.

**Step 7:** A retractor is used with 4 stay hooks placed to retract the labia. A 16 F Foley is placed with 5 milliliters in the balloon. (FIGURE 1)

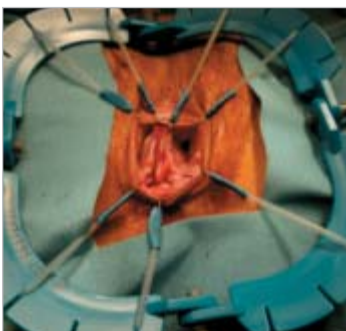


FIGURE 1

**Step 8:** Hemostasis is addressed by injecting 7 milliliters of one percent Lidocaine with a 1:100,000 dilution of epinephrine into the midline of the triangle and in both lateral angles. Clear fluid should be aspirated prior to injecting the epinephrine to prevent an intravenous bolus. An intravenous bolus of Lidocaine and epinephrine may lead to a cardiac arrhythmia. It is encouraged to wait four minutes to optimize the vasostatic properties of epinephrine. This will make the entire dissection less bloody and allow for a more precise dissection.

**Step 9:** An inverted T incision is made beginning at the apex and extending to the base of the triangle. The incision is extended laterally to both corners of the triangle for 2-3 centimeters.

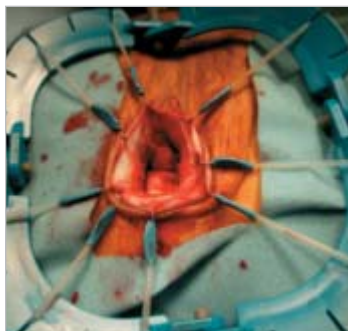


FIGURE 2

**Step 10:** Using a #10 blade, an incision is made at the interface between the posterior vaginal wall and the rectovaginal fascia starting on either the right or left lateral walls. The lateral walls are mobilized from the posterior vaginal wall. The midline rectovaginal fascia is finally incised. If an incision is carried through the posterior vaginal wall it will be closed at the end of the procedure. However, if an enterotomy is made into the rectum and the inside of the rectum is exposed closure is performed with a double layered approach. First, Alice clamps are placed at the corners of the enterotomy and the enterotomy is closed with running 3-0 silk. The closure is then lambertized with interrupted 3-0 silk. Once closed, the mobilization of the rectovaginal fascia from the posterior vaginal wall is continued for at least 6 – 8 centimeters from the perineum. (FIGURE 2)

### TISSUE PREPARATION AND AUGMENTATION

**Step 1:** Three 1-0 PDS® Sutures are placed deep into the right and left lateral edges of the rectovaginal fascia from head to toe. Good purchase is verified with each of the six stitches. Each stitch is placed 2 centimeters from the previous stitch. A digital rectal exam is performed to make sure there is no suture palpable in the rectum. If the suture is palpable in rectum, each suture is moved from side to side to determine which stitch needs to be removed and placed again. The right and left most cephalad stitches are secured in the retractor at the 11 and 1 o'clock positions, the middle stitches at 9 and 3 o'clock and the most caudal stitches are placed at the 7 and 5 o'clock position. (FIGURE 3)



FIGURE 3

**Step 2:** The hydrated Repliform® Matrix (4cm x 7cm) is transferred to the surgical field.

**Step 3:** Two Kelly clamps are placed length-wise on the top and bottom of the 4cm x 7cm Repliform Matrix.

**Step 4:** An 18 gauge angio-catheter is used to facilitate the passage of the 11 and 1 o'clock stitches through the top of the Repliform Matrix at least one centimeter from the edges. The angio-catheter is used to pass the 9 and 3 o'clock stitches, which are placed two centimeters from the first two stitches. Finally, the angio-catheter is used to pass the 7 and 5 o'clock stitches. (FIGURE 4)

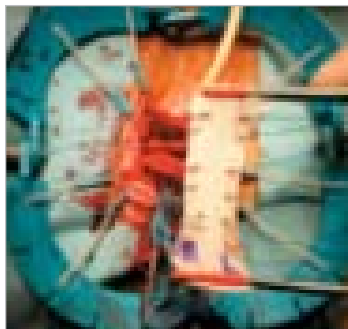


FIGURE 4

**Step 5:** Once each of the sutures has been placed, tie the 11 and 1 o'clock sutures. Proceed by tying the 9 and 3 o'clock sutures and finally tie the 7 and 5 o'clock sutures.

**Step 6:** The small amount of Repliform Matrix overlapping at the perineal body can be excised with scissors. A perineorrhaphy can be performed with a V stitch of 1-0 PDS Suture.

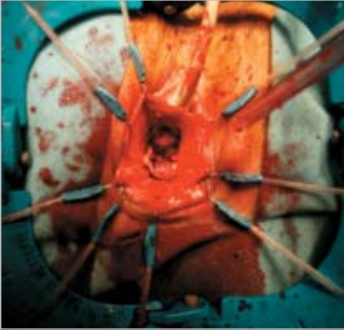


FIGURE 5



FIGURE 6

### DEFECT REPAIR AND CLOSURE

**Step 1:** After the perineorrhaphy is completed the Repliform® Matrix can be superficially tied to the perineal body with interrupted 2-0 or 3-0 Monocryl® Sutures. (FIGURE 5)

**Step 2:** A digital rectal exam is performed to make sure the rectovaginal defect is covered well. The vaginal width is measured making sure to have at least 2 1/2 – 3 finger-breadths. One of the major advantages of using Repliform Matrix in this fashion is that vaginal width is usually not compromised.

**Step 3:** Excise 3-5 millimeters of posterior vaginal wall from both the right and left posterior vaginal wall flaps. This tissue is removed to eliminate redundant tissue caused by the stretching of this connective tissue.

**Step 4:** The posterior vaginal wall is closed with 2-0 running locking Monocryl Sutures, while incorporating into the first two bites a part of the midline of the Repliform Matrix. This closes the potential space between the posterior vaginal wall and rectovaginal fascia. (FIGURE 6)

**Step 5:** Once approximating the perineum the suture is tied. The remaining perineum is closed with interrupted 4-0 Monocryl Suture, cutting the suture long to prevent the patient from feeling the suture while sitting.

### POST-OPERATIVE PROCEDURES

**Step 1:** The Foley catheter is discontinued once the patient is ambulatory. This is typically on postoperative day one.

**Step 2:** The patient typically returns for their first follow-up office visit six weeks after surgery.

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Repliform matrix complies with U.S. regulations in 21 CFR part 1270 and 1271 – Human Tissue Intended for Transplantation.

Refer to the package insert provided with the product for complete instructions for use including Indications for Use, Contraindications, Potential Complications, Warnings and Cautions.

Repliform matrix is exclusively distributed in the U.S. by Boston Scientific and is intended for use for repair or replacement of damaged or inadequate integumental tissue.

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