

When Small Stomas are a Big Deal: The Use of a Soft Silicone Pouching System on the Neonatal Ostomate Complicated by a Peristomal Wound

Author: L. Michelle Kaufman, RN, kaufman-lawson.lauren@tchden.org, The Children's Hospital, Aurora, Colorado

PROBLEM:

Care practices that affect the fragile infant with skin breakdown, wounds and ostomies in the Neonatal Intensive Care Unit (NICU) present major dilemmas for care providers. Neonates have many of the same skin, wound and ostomy complications that children and adults do with fewer safe and reliable care options. When choosing products to address fragile neonatal skin and developmental needs, it is important to consider basic wound care needs but also:

- Pain management
- Support of developmental needs
- Absorptive toxicity

OBJECTIVES:

To create a safe alternative pouching system that minimizes stress to the fragile infant while allowing wound healing and stool containment.

CASE REVIEW:

Infant A

25-week infant developed necrotizing enterocolitis (day 62). Required jejunal resection with jejunostomy and mucous fistula. Incision dehiscd on post op day 8.

Initial treatment: Standard ostomy pouching appliance, calcium alginate, and petroleum gauze covered with dry gauze.

Findings:

- Undermining of both wound fluid and stool
- The wound was both macerated and desiccated

Intervention: Alternative pouching system designed

- Soft silicone bordered dressing was cut to fit the wound and stomas
- A closed-ended preemie pouch was adhered to the soft silicone dressing
- Calcium alginate utilized where needed under the soft silicone dressing
- Dressing/pouching system changed q12 hours to manage volume of drainage and stool output
- Mucous fistula covered with soft silicone dressing – changed q 3-5 days
- Jeanna-Pacs at bedside

Outcomes:

- Wound and stomal output managed effectively
- Wound closed within 7 days – conventional pouching system resumed
- Infant remained on ventilatory support throughout treatment with little observable change in physiological status during dressing and ostomy pouching changes



Day 3



Alternative pouching system



Day 7

Infant B

26-week, 1055 gm male developed necrotizing enterocolitis (day 14). Required end ileostomy with mucous fistula. Immediate post-op complications resulted in dehiscence and fistula formation at base of ileostomy. Stool exited from fistulas on the side of the ileostomy into the base of the incision at 3 o'clock and 10 o'clock.

Intervention:

- A soft silicone bordered dressing was utilized as a skin barrier with a pouch affixed to contain stool
- Jeanna-Pacs at bedside

Outcomes:

- Wound fluid managed
- Periwound maceration prevented
- Day 22, stool was exiting through the os of the stoma
- Wound closed and a conventional pouching system was used until takedown



Day 2



Day 5



Day 11

Infant C

36-week infant with necrotizing enterocolitis times two. After third laparotomy, infant developed complications and the wound deteriorated to dehiscence. Prior to dehiscence this infant was managed with a standard hydrocolloid pouching system which required 2 changes per day and increased IV pain control for wound and ostomy care.

Intervention:

- An allograft placed by surgeon
- A soft silicone bordered dressing was chosen primarily because of the hydrophobic contact layer
- Change rate based on wound fluid management and stomal output (q6-12h)
- Jeanna-Pacs at bedside

Outcomes:

- Management of both wound fluid and stool
- No disruption of the graft
- No maceration or skin stripping noted
- Immediate decreased need for pain medication (none required after a few days)
- Marked decrease in stress to the infant
- Converted to conventional pouching system after wound closure



Hydrocolloid pouching system



Incisional dehiscence



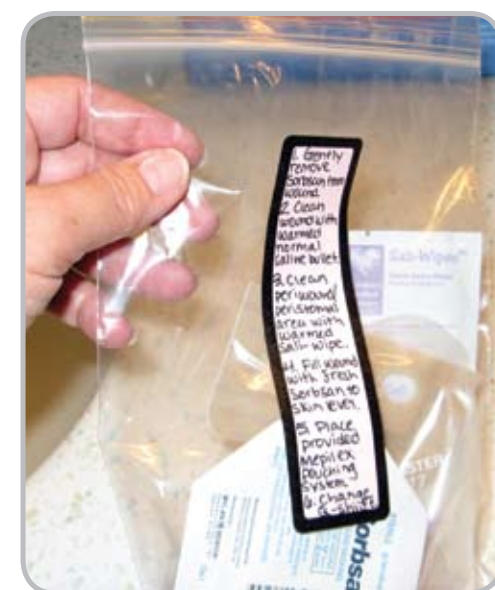
Soft silicone dressing in place

JEANNA-PACS Decreased confusion for staff and caregivers

Packets (Jeanna-pacs, named after our IT genius), made up in plastic bags, include step-by-step instructions for cleaning/preparation the site, application of the pouching system and needed materials. Four to eight bags are prepared and maintained by support staff. Float staff and new team members are put at ease by the clarity of directions and availability of the needed materials in a single location. This system has made the process timely, reproducible and consistent.

Infants have been documented to have lower pain scores during the dressing changes and recover more quickly. These results have initiated practice changes in our facility. More documentation and study of the exact impact is needed.

The packets have since become a standard of practice in our NICU.



CONCLUSION:

A bordered soft silicone dressing has been determined to be an effective skin barrier assisting with:

- Preservation of skin integrity
- Protection of fragile wound tissue
- Containment of stool by affixing of a pouch to the top of the dressing

Note: Cutting the bordered soft silicone dressing will alter the waterproof and bacteria proof properties of the dressing.

BEST PRACTICE APPLICATION

All products are warmed prior to contact with infants. The infants are supported developmentally during dressing and pouch changes by:

- Covering of eyes
- Care pauses
- Oral sucrose
- Hand/blanket swaddling
- Parental involvement

PRODUCT NOTATION
Mepilex® Border or Mepilex® Border Lite
Mölnlycke Health Care US LLC, Norcross, GA 30092
FINANCIAL ASSISTANCE/DISCLOSURE
Mölnlycke Health Care US, LLC.
provided assistance with poster design.

