Use of an Absorbent Clear Acrylic Dressing* on Surgical Wounds†

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Background

An essential component of a successful surgical wound treatment plan is selection of the proper dressing to provide a protective environment for healing. Numerous types of dressings are available to the health care professional to cover surgical incisions; however, gauze and tape remain the standard of care for many surgeons.

Recently, a dressing manufactured with a new, clear absorbent technology and a novel design has been introduced. This study is the first to clinically evaluate this new dressing on surgical wounds.1

Ideal Wound Dressing

Control wound drainage
Maintain moist wound healing
Waterproof, but allow for gaseous exchange
Provide thermal insulation
Protect from trauma & infection
Easy to apply & remove without trauma to the wound

Limitations of Gauze & Tape for Surgical Wounds

Inability to visualize surgical site through the dressing
Limited absorptive capacity
Limited protection from trauma & secondary infection
Oxygen desiccation of the wound
Adhesion to the wound, causing trauma during removal

Absorbent Clear Acrylic Dressing*

Transparent
Allows surgical site observations without removing the dressing
Unique absorbent polymer
Helps manage drainage
Will not adhere to wound - Non-traumatic removal of dressing
Semi-permeable transparent border & backing
Seals out water but allows passage of water vapor out of wound
Allows for medical wound healing
Unique adhesive designed to stick to dry & moist (diaphoretic) skin
Highly conformable
Molds to difficult body contours

Methods

Study design

• Single-site, prospective, open-label, non-randomized
• Twenty patients were included in the study
  ➢ Ten completed Laparoscopic Gastric Bypass Surgery (LGBS)
  ➢ Ten completed Open Gastric Bypass Surgery (OGBS)
• LGBS incisions were closed with subcuticular sutures and adhesive skin closure strips
• OGBS incisions were closed with staples
• Dressings were removed prior to discharge or by post-op day 3
• Dressing performance assessed using a standardized assessment tool
• Data analyzed with descriptive statistics

Patient Demographics

• 80% (n=16) female and 20% (n=4) male
• AVG (range) age: 43.1 (22-57) years
• AVG (range) height: 64.2 (58-68) inches
• AVG (range) weight: 255.8 (195-345) lbs.
• LGBS: All patients had five small incision wounds
• OGBS: Nine patients had one large incision wound and one patient had one large and one smaller incision wound

Study Dressings

Multiple sizes and configurations of the transparent absorbent acrylic dressing were available to the investigators. The investigators selected the appropriate size/configuration for each incision wound.

Table 1: Dressing Assessments at Application

<table>
<thead>
<tr>
<th>Variable</th>
<th>LGBS*</th>
<th>OGBS†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to Assess Wound Through Dressing</td>
<td>Good**</td>
<td>10 (100%)</td>
</tr>
<tr>
<td>Conformability</td>
<td>Good**</td>
<td>10 (100%)</td>
</tr>
<tr>
<td>Ease of Application</td>
<td>Good**</td>
<td>10 (100%)</td>
</tr>
</tbody>
</table>

Table 2: Pre-Removal Dressing Assessments at Follow-Up Visit

<table>
<thead>
<tr>
<th>Variable</th>
<th>LGBS*</th>
<th>OGBS†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorbency</td>
<td>Good**</td>
<td>10 (100%)</td>
</tr>
<tr>
<td>Adhesion</td>
<td>Good**</td>
<td>10 (100%)</td>
</tr>
<tr>
<td>Ability to Assess Wound Through Dressing</td>
<td>Good**</td>
<td>10 (100%)</td>
</tr>
<tr>
<td>Barrier Properties</td>
<td>Good**</td>
<td>10 (100%)</td>
</tr>
<tr>
<td>Patient Comfort During Use</td>
<td>Good**</td>
<td>10 (100%)</td>
</tr>
<tr>
<td>Wear Time</td>
<td>Good**</td>
<td>10 (100%)</td>
</tr>
</tbody>
</table>

Conclusions

The new transparent absorbent dressing was easy to use, showed excellent performance, and was well accepted by the surgeons and patients involved in the study. The dressings were comfortable to wear and to remove, provided good barrierprotective properties, and there were no product-related adverse events reported. These results indicate that the dressing may be an appropriate choice for clean, closed, and exposed surgical incisions and laparoscopic incisions, and that further study of other types of surgical incision wounds is warranted.

Total Clinic Satisfaction: 87%
Overall Value of Transparency: 87%

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*Chosen based on surgeon's preferences and criteria
† Confidential “Meshed” and “Versed” responses
** Compared to standard practice and treatment

Case Studies

Patient 019: Female OGBS, Age 53, wt. 219 lbs, ht. 67 in. Midline and lower left abdominal incisions both closed with staples and covered with multiple large oval dressings.

Patient 021: Female patient OGBS, age 51, ut. 222 lbs, ht. 64 in. Single midline incision closed with staples and covered with two large oval dressings.

Objective

The objective of this study was to evaluate the performance of a new absorbent clear dressing on surgical incision wounds.1