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Applied to Life.™

Clinical Case Study Summaries

3M™ Tegaderm™ Absorbent Clear Acrylic Dressings for Post-operative Incision Management



The evidence is clear

Surgical site infections affect around one million people globally every year.¹ These infections can lengthen a patient's stay, increase costs, and even be deadly. Minimizing contamination of surgical incisions is part of evidence-based protocols² to ensure the best possible outcomes for your patients. This series of case studies demonstrate that 3M™ Tegaderm™ Absorbent Clear Acrylic Dressings are the clear choice to maintain an ideal healing environment³ for surgical incisions—providing visibility⁴ for monitoring, protecting from external contaminants⁵, absorbing drainage⁶, and offering extended protection⁷ during and beyond their initial stay.

Extended wear time

Offers patients extended protection during and after their initial hospital stay.⁷

8-10
days average
wear time
post-op



Related studies on pages 5

Enhanced monitoring

Designed with a patented clear film and acrylic absorbent pad composed of a hydrophilic polymer⁸ to monitor incisions for early signs of infection⁴.



Related studies on pages 3 and 5

Excellent exudate management

Designed to absorb moderate exudate levels⁴ to promote an optimal healing environment³.



Related studies on page 6

Quick return to daily activities

Allows patients to shower and return more quickly to daily activities⁵.

Patients able
to shower
1 day
post-op



Related study on page 3

Conformability

Offers conformability to adapt to patient anatomy⁴ as well as staples, and its non-bulky⁹ design helps to prevent dressing roll or lift.



Related study on page 3

Unless noted, efficacy of 3M™ Tegaderm™ Absorbent Clear Acrylic Dressing was not statistically assessed.

¹Soule B. Evidence-Based Principles and Practices for Preventing Surgical Site Infections. Joint Commission International. 2018. Available at: https://www.jointcommissioninternational.org/-/media/jci/jci-documents/offerings/advisory-services/infection-prevention-and-control/jci_ssi_toolkit.pdf

²Ban, Kristen A. et al. Journal of the American College of Surgeons 2016; 224(1), 59-74.

³3M data on file. EM-05-001314

⁴3M data on file. EM-05-000138

⁵3M data on file. EM-05-014684

⁶3M data on file. EM-05-424442

⁷3M data on file. EM-05-014692, EM-05-014725

⁸3M data on file. EM-05-137984

⁹3M data on file. EM-05-000003

The clear choice for large and small abdominal surgical incisions.

Study Title: Use of 3M™ Tegaderm™ Absorbent Clear Acrylic Dressing on surgical incision wounds

Study Type: Prospective, open label, non-randomized clinical case series (n=20) evaluating Tegaderm absorbent clear acrylic dressings on abdominal incisions post-open and laparoscopic gastric bypass surgery.

Study Objective: To evaluate the performance of Tegaderm absorbent clear acrylic dressings with respect to multiple measures during assessments at application, follow-up and removal.

Study Summary: The dressings were used on incisions closed with staples and removed on post-op day three without incident. The authors reviewed multiple metrics with several aspects highlighted, including: ease of application; conformability; use on skin staples; ease of incision site monitoring; visibility allowing for easy monitoring of the incision; “good” absorption; and comfortable for patients to wear. Further studies of this dressing in different surgical settings are warranted.

Brian E. Lahmann, MD, and Christopher D. Joyce, MD, Midwest Comprehensive Bariatrics, Joliet, Ill. Nancy P. Atwood, 3M Health Care, St. Paul, Minn.

Throughout the study, 3M™ Tegaderm™ Absorbent Clear Acrylic Dressings were found to be:

- ✓ Easy to apply and remove
- ✓ Conformable on staples with good absorption
- ✓ Comfortable for patients to wear
- ✓ Transparent, offering visibility for incision monitoring
- ✓ A good barrier/have protective properties

Helped breast surgery patients return to activities of daily living within one day.

Study Title: Convenience Sample to Assess the Effect of a New Transparent Absorbent Acrylic Dressing on Patients Undergoing Breast Surgery

Study Type: A pilot study to evaluate 3M™ Tegaderm™ Absorbent Clear Acrylic Dressing used on post-mastectomy or lumpectomy surgical incisions (patients, n=10; incisions, n=20).

Study Objective: A surgical patient’s ability to return to activities of daily living, such as showering and early mobilization, improves the healing process and their overall quality of life. Tegaderm absorbent clear acrylic dressing was assessed for post-operative incision monitoring and quality of life metrics.

Study Summary: Patients reported the dressing was comfortable to wear (average wear time 12.5 days with a range of 7 – 20 days), allowed for ease of movement and early mobilization. The clear dressing allowed for visualization and monitoring of the incision, thus minimizing the need to remove dressing early. Additionally, patients were able to shower one day after surgery.

Herlick S, Leferink E, MacIntoch E. Convenience sample to assess the effect of a new transparent absorbent acrylic dressing on patients undergoing breast surgery. Poster presentation, Canadian Association of Wound Care (CAWC) Annual Meeting & Conference, November 16-19, 2006, Ottawa, Ontario, Canada.



**Patients able to shower
1 day post-op**

All patients reported 3M™ Tegaderm™ Absorbent Clear Acrylic Dressings were comfortable to wear and they were able to shower 24 hours after surgery.

Knee replacement patients able to start early mobilization and physical therapy exercises.

Study Title: Facilitating Early Mobilization and Wound Care Following Total Knee Arthroplasty Using a Clear Absorbent Acrylic Dressing

Study Type: Pilot study to evaluate a dressing on patients after total knee arthroplasty (n=20) using a four-level Likert scale and qualitative assessment on multiple metrics.

Study Objective: Evaluate thin, conformable dressing on surgical incisions closed with staples to facilitate early mobilization as key part of post-joint arthroplasty physical therapy program.

Study Summary: 3M™ Tegaderm™ Absorbent Clear Acrylic Dressing remained intact until removal on post-op day 10, and it adhered to the skin but not the staples. The incision was able to be monitored through the dressing while in the hospital or at home. Additionally, early physical therapy could be initiated because the dressing was thin and conformable.

Berube, M., APN, MScN, CNCC^{†5}, Malo M., MD, FRCS²⁻³, Rolland, M., BScN¹, Labrie, S., BScN, ER(c)¹. Poster presentation, Canadian Orthopaedic Nurses Association (CONA), May 25-26, 2013, Vancouver, British Columbia, Canada.

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Selected characteristics noted that led to a positive evaluation:

- Sealed and absorbed well
- Possible to leave dressing in place until staple removal at 10 days post-op
- Ease of knee flexion and extension
- Ability to monitor incision without dressing removal

Long-term follow-up of sternal dressing on cardiac surgical patients.

Study Title: Safety and Efficacy of an Absorbent Clear Acrylic Dressing in Cardiac Surgery



Study Type: Retrospective review of patients who underwent open cardiac surgery

- In 2006: received gauze dressings post-operatively (n=199)
- In 2007: received clear acrylic absorbent dressing post-operatively (n=164)
- In 2010: received clear acrylic absorbent dressing post-operatively (n = 154)

Study Objective: To evaluate the effectiveness and utility of 3M™ Tegaderm™ Absorbent Clear Acrylic Dressing on post-operative sternal incisions.

Study Summary: When compared to traditional cotton-gauze dressings on open sternotomy incisions, Tegaderm absorbent clear acrylic dressing allowed for clear monitoring of the incision for signs of infection and minimized the need for dressing removal. Providers were also able to perform post-operative echocardiograms through the dressing. These findings were consistent in the years where dressings were the standard-of-care.

Moss E., Jacques F., Pagé P., Demers P., Jeanmart H., Hôpital du Sacré-Cœur de Montréal, QC, Canada. Poster presentation, Canadian Association of Wound Care (CAWC), November 8-12, 2012, London, Ontario, Canada.

Traditional cotton gauze	3M™ Tegaderm™ Absorbent Clear Acrylic Dressings
	
Allowed for clear monitoring of the incision for signs of infection	
✗	✓
Minimized the need for dressing removal	
✗	✓
Performed post-operative echocardiograms through the dressing	
✗	✓

Clear absorbent dressing demonstrated prolonged wear time on pediatric patients.

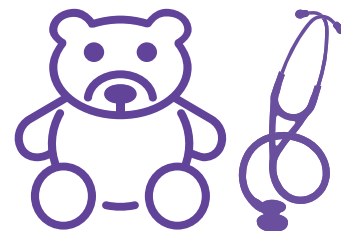
Study Title: Evaluation of an Absorbent Clear Acrylic Dressing in Pediatric Patients

Study Type: Prospective, non-randomized study of a dressing on closed sternal incisions of pediatric patients after open cardiac surgery (n=30).

Study Objective: Evaluate the performance of an absorbent clear acrylic dressing in pediatric patients undergoing open cardiac surgery.

Study Summary: Incision visibility was consistently rated 'much better' with 3M™ Tegaderm™ Absorbent Clear Acrylic Dressing when compared to traditional dressings. The visibility benefits, plus prolonged wear time (average removal on post-op day five), allowed the incision to be monitored for signs of infection while the dressing remained in place, and minimized the need for early dressing removal.

Goldberg M, Quiñonez LG. Evaluation of an absorbent clear acrylic dressing in pediatric patients: kids hate having bandaids taken off! Poster presentation, Canadian Association of Wound Care (CAWC) Annual Conference, November 4-7, 2010, Calgary, Alberta, Canada.



Routine incision inspection

without dressing removal on pediatric patients with the help of 3M™ Tegaderm™ Absorbent Clear Acrylic Dressings.

Ease of application and long wear time on different types of surgical incisions.

Study Title: Absorbent Clear Acrylic Dressing Versus Gauze Dressing in the Treatment of Surgical Wounds

Study Type: Pilot study of post-operative dressing performance on patients undergoing different general and vascular operations. Anatomic surgical sites included chest, upper and lower abdomen and leg.

Study Objective: To evaluate the performance of an absorbent clear acrylic dressing (n=21) compared to traditional gauze and tape (n=21) post-operative dressings.

Study Summary: In various closed incision types and anatomical locations, 3M™ Tegaderm™ Absorbent Clear Acrylic Dressing “performed consistently better than gauze dressings” with average wear time and absorption capability.

Labrecque C, Labrie S. Absorbent Clear Acrylic Dressing versus Gauze Dressing in the Treatment of Surgical Wounds. Poster presentation, World Union of Wound Healing Societies, June 4-8, 2008, Toronto, Ontario, Canada.



3M™ Tegaderm™ Absorbent Clear Acrylic Dressings

Transparency with improved fluid handling for split-thickness skin graft donor sites.

Study Title: Treatment of Skin Graft Donor Sites With a Unique Absorbent Clear Acrylic Dressing

Study Type: Pilot study of patients undergoing operations that required split-thickness skin graft (STSG) from the thigh (patients, n=12; donor sites, n=13).

Study Objective: To evaluate the performance of an absorbent clear acrylic dressing on STSG with respect to healing trajectory, ability to handle significant exudate without leaking and patient perception of pain.

Study Summary: 3M™ Tegaderm™ Absorbent Clear Acrylic Dressing handled fluid exudate without leakage (n=3) and had an average wear time of 14.6 days for wounds that completed the study (n=9). Transparency of the dressing allowed for observation of normal healing without “unnecessary dressing changes or disruption to the wound bed.”

Spear, M., & Bailey, A. (2009). Treatment of skin graft donor sites with a unique transparent absorbent acrylic dressing. Plastic Surgical Nursing, 29(4), 194-200.



14+ days
average wear time
(skin graft donor sites)

3M™ Tegaderm™ Absorbent Clear Acrylic Dressings had an average wear time >14 days for wounds that completed the study (n=9)



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