Initial Pain Relief in Complex Wounds with Application of a Bioresorbable Silver–Lidocaine Matrix: Insights from a Case Series

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Disclosures

- KOL for Acera Surgical Inc.
- KOL for Kerecis®
- Advisory board member for Tides Medical

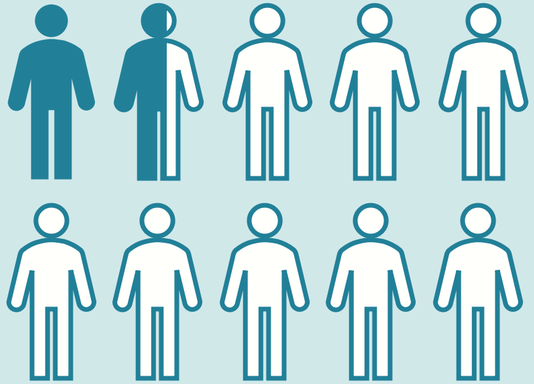
Pain is Costly for Both Patients & Institutions

Nearly **86%**

Of patients undergoing surgery report **postoperative pain**, often **moderate to severe**[1]

up to **25%**

Of post-surgical **readmissions** in the **first day** after discharge are **pain-related**[2]



More than 1 in 10 surgical patients experience **opioid-related adverse events**[3]

*Numbers are rounded from averages, or in the case of ranges, taken from the middle of the range.

References: 1. Gan et al. *Curr Med Res Opin*. 2014;30(1):149-160. 2. Chidambaram et al. *Cureus*. 2022;14(12):e32209. 3. Shafi et al. *JAMA Surg*. 2018;153(8):757-763.

Bioresorbable Antimicrobial Matrix with Lidocaine HCl

Goal: use matrix to provide rapid pain relief, antimicrobial coverage, and healing support

- Fully synthetic bioresorbable matrix conforms to micro-textures of wound bed[1-3]
- Initial pain relief with lidocaine HCl comparable to a 4% ointment[4]
- Non-toxic antimicrobial silver provides 99.99% reduction in microbial burden[5†]

† As demonstrated in vitro

References: 1. Agarwal, A., et al. *Biomaterials*, 31 (4), 680-690, 2010. 2. Study 15T_41113_02, Systemic Toxicity, Local Tissue Response, and Wound Healing Study of MicroLyte Ag, Following Repeated Treatment to Full-Thickness Wounds in Rats – 28 Days. Data on file, Imbed Biosciences. 3. MTT cytotoxicity testing conduct at NAMSA. Data on file, Imbed Biosciences. 4. Imbed Biosciences. Report #907. Data on file. 5. Study 15-002, Microlyte Shelf Life and Stability. Data on file, Imbed Biosciences.

Case 1

87-year-old female; nonhealing transmetatarsal amputation site with chronic osteomyelitis

- Extensive PAD, awaiting bypass surgery
- Excision of necrotic tissue
- Bioresorbable matrix, silver dressing
- L.E.T. gel

Reported Pain: 1 → 10

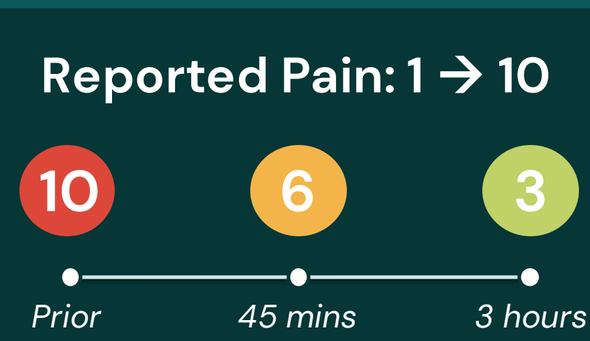
Prior	45 mins	3 hours
8	2	2

Case 2

91-year-old female; recurrent squamous cell carcinoma

- Previous excision of carcinoma
- Bioresorbable matrix, silver dressing
- Topical lidocaine, gabapentin, tramadol

Reported Pain: 1 → 10



Case 3

57-year-old female; squamous cell carcinoma

- Excision of carcinoma
- Bioresorbable matrix, collagen, foam dressing
- L.E.T. gel, oxycodone

Reported Pain: 1 → 10

Prior	45 mins	3 hours
7	5.5	4.5

Conclusion

- **Rapid (< 1 hr) and sustained pain reduction** in all three cases despite variability in wound etiology and concomitant analgesic use
- Case findings suggest matrix may provide both **structural coverage** and **meaningful early analgesic benefit**
- Further clinical evaluation is warranted; positive outcomes documented across **partial- and full-thickness burns, donor site wounds, chronic ulcers, and various surgical wounds**