Innovative Solutions Utilizing Ovine Extracellular Matrix with Antimicrobial Silver in the Management of Wounds with Exposed Tendon and Bone

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Introduction
Technologies to reduce the risk of microbial contamination are important additions to the wound care armamentum. An ECM technology containing ionic silver (ECM-Ag) offers a new tool to combat non-healing wounds, and can be used in the early phases of wound healing and prior to non-antimicrobial ECM technologies.

Methods
Patients (n=4) with wounds including exposed bone and tendon were debrided prior to a 2-week challenge with ECM-Ag technology. Dressings were changed every 3–7 days. After the initial 2-week challenge, treatment was switched to non-antimicrobial ECM technology, with weekly treatment.

Conclusions
An antimicrobial ECM technology offers a new approach to managing at-risk wounds early. Following a two-week challenge all wounds responded positively to the ECM-Ag, and wounds were infection free, enabling a switch to a non-antimicrobial ECM.

References and Disclosures

Results

Case Study 1
Patient: 88 year old female
Medical History: Underlying arterial disease, multiple toe amputations
Wound Description: Acute traumatic injury, periosteum exposed
Previous Treatments: Wet-to-dry, antibiotics

Week 0:
1.5 x 1.5 cm.
Debridement, ECM-Ag, GV/MB.

Week 1:
1.5 x 1.2 cm.
Debridement, ECM-Ag, GV/MB.
• 20% reduction

Week 5:
1.2 x 1.0 cm.
Debridement, ECM, GV/MB foam.

Week 6:
0.2 x 0.3 cm.
Debridement, ECM, GV/MB foam.
• 97% reduction
• Periosteum covered

Case Study 2
Patient: 72 year old male
Medical History: Diabetic, osteomyelitis bilat great toe
Wound Description: Pressure injury, exposed periosteum
Previous Treatments: Diabetic shoe

Week 0:
2.0 x 1.0 cm.
Debrided callus, ECM-Ag, GV/MB foam.

Week 3:
0.7 x 0.5 cm.
Debridement, ECM, GV/MB.
• 83% reduction
• Periosteum epithelization

Week 6:
0.2 x 0.3 cm.
Debridement, ECM, GV/MB foam.
• 97% reduction
• Granulated base

Case Study 3
Patient: 61 year old male
Medical History: Venous disease, diabetic neuropathy
Wound Description: Midfoot amputation, broke down under pressure, macerated periwound and hypergranular

Week 0:
4.0 x 1.0 cm.
Debrided, ECM-Ag, GV/MB foam, CAM boot.

Week 2:
3.0 x 1.0 cm.
Debridement, ECM, GV/MB.
• 25% reduction
• Periosteum maceration resolved

Week 4:
2.5 x 0.5 cm.
Debridement, ECM, GV/MB foam.
• 69% reduction
• Granulated base

Case Study 4
Patient: 58 year old female
Medical History: Digital amputation, diabetes
Wound Description: Traumatic wound to 3rd toe – tendon exposed

Week 0:
1.5 x 1.5 cm.
Debrided, ECM-Ag, contact layer.

Week 2:
1.3 x 1.0 cm.
Debridement, ECM-Ag, GV/MB.
• 42% reduction
• Tendon partially covered

Week 4:
Wound closed

An antimicrobial ECM technology offers a new approach to managing at risk wounds early. Following a two-week challenge all wounds responded positively to the ECM-Ag, and wounds were infection free, enabling a switch to a non-antimicrobial ECM.

References and Disclosures


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