

▼ Devices & Intervention e-Posters



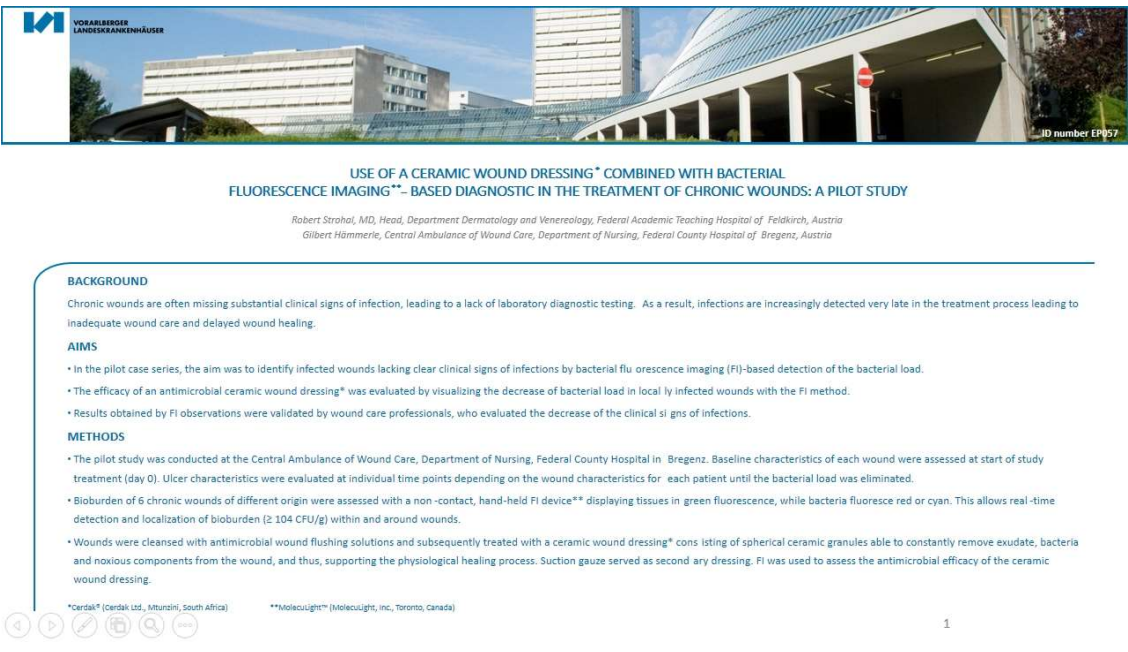
Robert Strohal

USE OF A CERAMIC WOUND DRESSING IN COMBINATION WITH BACTERIAL FLUORESCENCE IMAGING FOR TREATMENT OF CHRONIC WOUNDS: A CASE SERIES || Oral Presentation #EP057

EWMA 2020
E-POSTERS
46 viewers


View Session
Outline


View Abstract



USE OF A CERAMIC WOUND DRESSING* COMBINED WITH BACTERIAL FLUORESCENCE IMAGING - BASED DIAGNOSTIC IN THE TREATMENT OF CHRONIC WOUNDS: A PILOT STUDY**

Robert Strohal, MD, Head, Department Dermatology and Venereology, Federal Academic Teaching Hospital of Feldkirch, Austria
Gilbert Hämmerle, Central Ambulance of Wound Care, Department of Nursing, Federal County Hospital of Bregenz, Austria

BACKGROUND
Chronic wounds are often missing substantial clinical signs of infection, leading to a lack of laboratory diagnostic testing. As a result, infections are increasingly detected very late in the treatment process leading to inadequate wound care and delayed wound healing.

AIMS

- In the pilot case series, the aim was to identify infected wounds lacking clear clinical signs of infections by bacterial fluorescence imaging (FI)-based detection of the bacterial load.
- The efficacy of an antimicrobial ceramic wound dressing* was evaluated by visualizing the decrease of bacterial load in locally infected wounds with the FI method.
- Results obtained by FI observations were validated by wound care professionals, who evaluated the decrease of the clinical signs of infections.

METHODS

- The pilot study was conducted at the Central Ambulance of Wound Care, Department of Nursing, Federal County Hospital in Bregenz. Baseline characteristics of each wound were assessed at start of study treatment (day 0). Ulcer characteristics were evaluated at individual time points depending on the wound characteristics for each patient until the bacterial load was eliminated.
- Bioburden of 6 chronic wounds of different origin were assessed with a non-contact, hand-held FI device** displaying tissues in green fluorescence, while bacteria fluoresce red or cyan. This allows real-time detection and localization of bioburden (≥ 104 CFU/g) within and around wounds.
- Wounds were cleansed with antimicrobial wound flushing solutions and subsequently treated with a ceramic wound dressing* consisting of spherical ceramic granules able to constantly remove exudate, bacteria and noxious components from the wound, and thus, supporting the physiological healing process. Suction gauze served as secondary dressing. FI was used to assess the antimicrobial efficacy of the ceramic wound dressing.

*Cerdak® (Cerdak Ltd., Mtundini, South Africa) **Moleculight™ (Moleculight, Inc., Toronto, Canada)

   share

JOIN THE DISCUSSION

There are no comments yet.

PRESENTATIONS IN THIS SESSION



Steven Percival

INVESTIGATION OF THE ANTIBIOFILM AND DEBRIDEMENT EFFECTS OF ANTIBACTERIAL AGENTS USING AN IN VITRO ARTIFICIAL WOUND ESCHAR BIOFILM MODEL



Rajesh Kesavan

MA-ECM (MINIMAL MANIPULATING AUTOLOGOUS EXTRACELLULAR MATRIX)- A NOVEL APPROACH TO TREAT NON HEALING DIABETIC FOOT ULCER USING 3D BIO-PRINTING TECHNOLOGY



Steven Percival

ASSESSMENT OF THE DEBRIDEMENT EFFICACY OF A CONCENTRATED SURFACTANT GEL USING A VALIDATED FLUORESCENT WOUND ESCHAR MODEL



Carlo Astarita

HEALING OF COMPLEX WOUNDS WITH AUTOLOGOUS MICROGRAFTS TECHNOLOGY



Hendrik Muller

DEVELOPMENT OF A WOUND MODEL WITH TEMPERATURE DISTRIBUTION BASED ON THERMAL IMAGES OF DIABETIC FOOT WOUNDS



Steven Percival

EVALUATION OF A CONCENTRATED SURFACTANT GEL ON RE-EPITHELIALIZATION DURING HEALING USING AN IN VITRO



Joachim Dissemond

OBSERVATIONAL STUDY OF A MOISTURE WICKING FABRIC WITH SILVER FOR SKIN FOLD MANAGEMENT



Laura Jones

REAL-WORLD EVIDENCE DEMONSTRATING UTILITY OF BACTERIAL FLUORESCENCE IMAGING TO GUIDE TREATMENT DECISION MAKING IN 135 WOUNDS



Sanjay Vaidya

ER:YAG LASER AND RECOSM TECHNOLOGY TO TREAT LOWER EXTREMITY ULCERS

Franck Duteille

Terry Swanson

Paul McKenna