

Treating Bacterial Burden in Chronic Lower Leg Ulcers

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Aim

Compare two antimicrobial dressings (cadexomer iodine and nanocrystalline silver) in wound healing for their:

- **clinical effectiveness**
- **cost effectiveness**

RCT Design

A multi-site randomised controlled trial (RCT):

- RDNS (n=180)
- Silver Chain (n=101)

Recruitment Timeframe: March 2006 – February 2007

Clients were randomised to:

- Nanocrystalline silver dressing (Acticoat)
OR
- Cadexomer iodine (Iodosorb)

Eligibility Criteria

- Client was 18 years or older
- Had a Lower Leg Ulcer (\leq 15cms diameter)
- Had one or more signs of critical colonisation / infection
- No course of topical antiseptic treatment 1 week prior to recruitment
- No course of antibiotics 48 hours prior to recruitment
- Not using systemic steroids
- No diagnosis of diabetes or malignancy related to the leg ulcer
- Not receiving palliative care

Data Collection

Clients were monitored for a 12 week period or less if healed.

Data was collected by a 'Trial Team' nurse trained at each of the study sites.

Primary measure:

– Wound healing rate

[Advanced Medical Wound Imaging System (AMWIS)]

Conclusions

We concluded that:

- The treatments had comparable *clinical effectiveness*:
 - 1st fortnight of treatment
 - Wounds not healing in a 12 week monitoring period
- The treatment were comparable from a *cost perspective*:
 - Young wounds
 - Large wounds
- Use of multi-layer compression bandaging, resolving wound slough, managing wound exudate, and intervening when the wound is young and small expedites wound healing.

Conclusions

- Clinician assessment and wound swab measures of critical colonisation / infection are poorly correlated. Further research is required to understand these differences and to guide the assessment of bacterial burden in wounds.
- Future antimicrobial research:
 - a) include a measure of wound inflammation
 - b) examine wound exudate management
 - c) include a control, no antimicrobial treatment group with best practice multi-layer compression therapy & wound bed preparation
 - d) include segments of individuals living with Diabetes Mellitus, arterial leg ulcers, and wounds other than lower leg ulcers.

Impact of these results

1. Dissemination of findings to clinical staff and management to influence practice
2. Revision of product availability in assessment
3. Revision of product availability in general
4. On research agendas

Implications of the research

Service Delivery Organisations

1. Revisit or develop clinical procedures
2. Disseminate findings to clinicians

Research Organisations

1. Wound exudate and antimicrobials
2. Wound inflammation and antimicrobials
3. Further examination of wound biofilms
4. Clinician assessment of critical colonisation / infection
5. Measures of critical colonisation / infection
6. Control V Antimicrobial trial
7. Repeat for Diabetes Mellitus, arterial leg ulcers, wounds other than lower leg ulcers

Implications of the research (cont'd)

Policy Makers / Funders

1. Enabling equal access to both treatments
2. Facilitate access to multi-layer compression therapy
3. Facilitate and fund research
4. Facilitate the dissemination of research findings

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