

# WOUND HEALING IN THE AGED AFTER PRE TIBIAL LACERATION

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## Abstract

Wound healing is impaired in the advanced aged population (1). The rate of epithelialisation invitro displayed reduced cellular activity when comparing keratinocytes from an aged human donor to a newborn donor (2). Due to this reduced activity in the epidermis, dermis and the altered extra cellular matrix production, the older persons skin becomes thinner and less dense and more susceptible to damage even after trivial traumas and more difficult to heal (1).

## Aim

To share with colleagues using a case study of a 100 year old lady, how healing was achieved on a pre-tibial haematoma sustained from a fall over a zimmer frame, despite the literature suggesting impaired healing and reduced cellular activity in the older person.

Identify how creating the optimal wound healing environment and concordance can achieve wound healing in an older lady.

## History

Mrs Black is a 100 year old lady living alone in a bungalow who tripped on her zimmer frame in her own home. She sustained a large haematoma (Picture 1) to her right lower limb and was admitted into hospital for two weeks respite and antibiotic therapy then discharged into the care of the community Tissue Viability Nurse and District Nursing Services.

## Medical history

Cerebral Vascular Accident, Myocardial Infarction, Atrial Fibrillation, Osteoarthritis.

## Photograph 1: Initial Assessment



## Medication

Cocodamol 30/500mgs 6-8 hourly, PRN Aspirin, Frumil, Multivitamin, Ascorbic acid, all daily.

## Issues

Concordance with recommended treatment

## Treatment and rationale

Due to the pain and anxiety as a result of the incident, Mrs Black refused to allow any sharp debridement of the necrotic tissue. She required a suitable non-adherent primary dressing to allow autolysis and ease of removal on dressing change. This was found in the form of a Hydrogel sheet (Actiform Cool™), which creates a moist warm wound environment (3) and was found to be comfortable for the lady (Picture 2).

After a vascular assessment in hospital it was recommended to use compression therapy- much to this lady's dismay. After discussions and an evolving trusting relationship with the staff a short stretch bandage (Actico™) was found to be most suitable. This was used to reduce venous hypertension and hypoxia and allowed the lady to wear comfortable footwear.

## Anxiety and pain

Mrs Black was advised to take regular analgesia, particularly prior to dressing change and at bedtime to ensure a good night's rest. A contact number for the 24 hour District Nursing Service was also left with Mrs Black to reassure and relieve anxiety in order to build up a certain level of trust to progress from changing the dressing on alternate days to twice weekly.

## Photograph 2: Wound Care Products



## Outcome

Concordance and creating the correct wound environment achieved complete healing with this lady's leg within 15 weeks of assessment (picture 3). It highlighted the work of a dedicated team and an ongoing therapeutic bond established between the patient and professional – and clarified the value of the patient believing the professional had a sustained interest in understanding their problem (4).

## References

1. <http://www.worldwidewounds.com/2004/august/Enoch/Pathophysiology-Of-Healing>
2. Gilchrist, BA (1983) In vitro assessment of keratinocyte aging. Journal of Investigations Dermatology, 81(1), 184-189.
3. Winters (1962) Formation of the scab and the rate of epithelialisation of superficial wounds in the skin of the young domestic pig. nature193, 293-294.
4. Mandal, A (2006) The concept of concordance and its relation to leg ulcer management. Journal of Wound Care 15(6), 339-34.

## Photograph 3: Healed Wound

