

A CLINICAL EVALUATION OF A BIOCELLULOSE MEMBRANE DRESSING IN NEUROPATHIC AND NEURO-ISCHAEMIC ULCERATION

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Background and Aims

The diabetic foot ulcer is a major cause of lower limb amputation^{1,2}. When foot ulcers do not respond to basic treatment then advance treatments such as extracellular matrix proteins may offer an alternative¹. Aim to see if Nanogen bio cellulose products heal previously unhealed chronic wounds in a cost effective manner.

Method Patients with foot ulcers that had failed to heal in six months or more were evaluated for 2 - 4 weeks A full holistic assessment was undertaken :-gender, age wound type, underlying comorbidities. Wounds were measured and photographed at every dressing change with observations on peri-wound skin, exudate type and colour. Secondary dressing and off-loading were applied at the discretion of the multidisciplinary team. All patients were reviewed regularly. All patients documented length of treatment and estimated cost to date.

Results 4/20 patients had neuroischaemic, neuropathic or mixed aetiology ulcers the mean non-healing time prior to evaluation 92 days, Mean to time to healing 14.25 days.. Using a conservative cost model, this small sample demonstrated cost efficiencies compared to maintaining the wound. **Conclusion** Nanogen Aktiv appeared to kick start hard to heal wounds. It mimics the wound ECM and stimulates epithelialisation and improves inter cellular signalling, both of which have been shown to be critical in stimulating the healing of neuropathic and neuroischaemic foot ulcers. . Nanogen healed 18 out of 20 previously unhealed wounds .F

Case study Example.

54 year old insulin dependent diabetic presented with ulceration to his right hallux of 8 weeks duration. He been given broad spectrum antibiotics but the wound had failed to improve. On examination he had full complement of foot pulses with good biphasic Doppler signals. His Right Hallux was grossly oedematous with a necrotic area on dorsal and plantar aspect of his phalangeal joint. These appear to be connected. He had a ray amputation of the right hallux on 18th September 2015 he was admitted to the hospital with an abscess associated with sepsis third right toe, a foreign body was surgically removed following debridement he was given systemic antibiotics Flucloxacillin. Nanogen (Genadyne Pharma)was applied as a primary dressing with secondary dressing of Mepore® (Molnlycke Health Care. 23rd September he developed a sinus of the right plantar, topical negative pressure was applied maintaining a seal continued to be a challenge and this affected his quality of life. The patient then requested a return to Nanogen and mepore combination. He continued to comply with offloading, and he went on to heal successfully within 2 months.

References

- 1 Edmonds M (2013) The Diabetic Foot. The Health Foundation
http://patientsafety.health.org.uk/sites/default/files/resources/diabetic_foot_ulceration_0.pdf May 2013
- 2 Lauterbach s,Kostev K, Kholman T, (2010) Prevalence of Diabetic Foot syndrome and its risk factors
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Image 1 18th September 2015, On referral to wound care team following surgery



Image 2, 23rd September 2015, 5 days following Nanogen application haemoserous exudate, granulating wound bed.



Image 3, 14th October 2015, 25 days following Nanogen application, rapid epithelisation



Image 4 21st October 2015 almost healed