

Use of **Activon Medical Grade Manuka Honey** in the Diabetic Patient with digital ulceration, synovial involvement and osteomyelitis.

Corns and callous on the dorsum of the 5th toe are a common occurrence in healthy patients and may be attributed to footwear or repeated friction and shear over the prominences of the toes. In the diabetic patient with compromised peripheral vascular health and neuropathic changes the corn and callous formation can lead to serious complications and precede ulceration, synovial penetration and osteomyelitis.

Two patients presented to the Ipswich NHS Trust Diabetic Foot Clinic with calloused areas at the proximal inter-phalangeal joint (PIPJ) of the 5th toe, a site that is most often associated with the common hard corn. Although the area involved with this condition is very small, the consequences of infection and deterioration are potentially limb threatening.



Patient A - Prior to debridement

On first presentation, patient A had symptoms of osteomyelitis characterised by localised signs of infection, inflammation and extreme pain. The pain was rated at 10/10 on light pressure and was experienced despite a level of neuropathy. Patient A had adapted his shoes by cutting out the area immediately in contact with the toe to relieve the pain. Release of purulent exudate was observed on debridement.

Patient B had no symptoms other than hard skin over PIPJ of the 5th toe which on debridement revealed a depth of tissue damage and penetration of the synovial area evidenced by the type of exudate discharged. Swabs returned positive for MRSA and Osteomyelitis was suspected.



Activon medical grade Manuka honey was chosen as a topical dressing for its broad spectrum antimicrobial, anti-inflammatory and debriding properties as well as its effect against MRSA. Activon Tulle was applied directly to the wounds post debridement, covered with cotton gauze and secured with tube, gauze and tape.

Systemic antibiotics were prescribed according to the sensitivities of the bacteria involved. Both patients were shown how to change the dressings and asked to change them at 2-3 day intervals or sooner if strike

through became apparent. Appointments were made at two weeks and the both patients were observed by community nurses in between appointments.

Results

Patient A: On review at two weeks the pain was markedly reduced, rated at 2/10 on moderate pressure and the patient came to the clinic wearing normal closed toe shoes without discomfort. Inflammation of the toe was significantly reduced. The wound is being managed effectively and treatment with Activon tulle continues as a barrier to further contamination as healing progresses.

Patient B - Post debridement at second visit



The wound remains clean but has required adaptation of the dressing technique in order to keep the wound aperture open as the tulle dressing was applied over the wound superficially and the wound has been able to 're-seal' between dressing changes. To allow continual debridement to occur via the osmotic action of the honey dressing and to allow deeper penetration of the dressing, Activon has been used and shaped to form a physical 'plug' packed into the aperture.

Both patients have tolerated the products well, found application easy, and on examination the wounds have maintained a clean, infection free appearance.

Based on the two patients in this trial the use Activon and Algivon medical grade Manuka honey in conjunction with systemic antibiotic management has maintained a positive environment for healing when managing penetrating digital ulceration with deep involvement. In both cases the product was easy to apply by both clinician and patient.

Although all patients attending the diabetic foot clinic are reviewed frequently, the two cases described highlight a common condition associated with mechanical stresses that in the diabetic patient can have serious implications. Signs of callous, often precursored by deterioration of foot structure due to neurological and vascular changes in the diabetic patient are warning signs for potential issues in the future. These include the risk of deeper penetration of corns and callous with resulting consequences as seen in the two cases described. The observation of the foot by all professionals involved with the diabetic patient is advised to prevent complications and referral to diabetes specialist podiatrists for timely intervention is essential for appropriate management and preventative therapy.

Conclusion

Based on the two patients in this trial the use of Activon and Algivon medical grade Manuka honey in conjunction with systemic antibiotic management has contributed to a positive infection free environment for healing to occur. Activon honey is an effective antimicrobial dressing with further debridement and anti-inflammatory properties that lends itself well to managing penetrating digital ulceration with deep involvement.



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