

review for the characteristics of their ulcers, severity, location, time to healing, etc. RESULTS: 73 UAE nationals (males: 58.2%) had DM. 59/73 (80%) had DM > 7yrs, and half were insulin-dependent. Mean age: 57.4yrs. 63% had 2 or more additional risk factors for DWUs. DWU healing rates trended better in UTexas class A/B wounds (60% @90d) vs. C/D (60% @150/240d). Numbers of class A outranked class B/C/D wounds almost 2:1 (p<0.01). Clinical observations of greater negative impact on healing were higher in patients whose healing times >90d, as compared to <90d (p<0.05). DISCUSSION: Almost 2/3 of DWUs occurred in patients with complex illness and multiple risk factors. Healing rates depended upon initial DWU staging and consistent care. Unique cultural behaviours and adherence issues were significant factors in contributing to the delay of wound healing in those persons who exceed 90d to healing. As a result, our hypothesis for further study is that although some existing data from western studies may be similar to ours, treatment strategies from western studies may not always be generalizable to this eastern population.

H 002 • DOES MAGNETIC RESONANCE IMAGING GIVE SUPERIOR DIAGNOSTIC INFORMATION OVER X-RAY IN THE MANAGEMENT OF DIABETIC FOOT ULCERATION ?

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The aim of this study was to assess what further information Magnetic Resonance Imaging (MRI) can provide over X-ray in the management of diabetic foot ulceration. We studied 23 patients with indolent ulceration; 8 patients had type 1 diabetes and 15 had type 2 diabetes. Mean age was 61.7 years, range 26-84 years. All patients had previously been investigated with X-ray and had received standard treatment. MRI was carried out using pulse sequences to detect bone and soft tissue abnormalities. These included T1, STIR (Short T1 inversion recovery) and T1 with fat saturation and gadolinium. After MRI, there were 12 new diagnoses which could not be made on X-ray only. These included osteomyelitis (5), fluid collections (5), Charcot osteoarthropathy (1), and plantar fasciitis (1). Subsequently 4 out of 5 patients with osteomyelitis had surgical bone resection and healed and 3 of the 5 collections had surgical drainage and healed. Thus MRI provided a definitive diagnosis in 51% of the studied patients and this resulted in specific treatments which would not have been considered before MRI examination. In difficult diabetic feet, not responding to standard treatment, MRI is a useful investigation.

H 003 • EFFECTIVENESS OF BI-VALVED TOTAL CONTACT CAST TECHNIQUE IN REDUCING PLANTAR PRESSURES IN THE NEUROPATHIC FOOT

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International guidelines are advocating the use of contact casting as the "gold standard" in the treatment of neuropathic foot ulceration, however there is no consensus on the application of, or, materials to be used. The technique used in this pilot study today has been modified over time due to the advent of new products and to overcome the disadvantages associated with a Total Contact Cast. The downloading of plantar pressures while the patient is ambulating is one of the most challenging aspects of wound management. If pressure download is not achieved, irrespective of the wound dressing used, wound healing will be delayed. The aim of this pilot study was to assess the ability of the casting technique and materials to download pressure from a given site. All subjects had a history of Diabetes. Baseline data was obtained using an emed® pressure platform to collect data whilst the subject walked barefoot with a Foam wound dressing covering the wound. Plantar pressure insoles (pedar®) were used to assess pressure download of the wound within the cast using the casting technique. Maximum pressure area, maximum pressure value and loading time of maximum pressure area as a % of contact time were the parameters assessed. Data collected from the pressure platform provides basic descriptive data on each of the subjects. The high contact time on the maximum pressure area is typical of this condition. Analysis of pedar insole data revealed that in all cases, zero to minimal loading occurred at the wound site when wearing the contact cast.

H 004 • EFFICACY OF POLY HYDRATED IONOGENS IN ACHIEVING STABLE WOUND CLOSURE IN RECALCITRANT DIABETIC FOOT ULCERS: A MULTICENTRE PILOT STUDY

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INTRODUCTION: Diabetic Foot Ulcers (DFU) continue to present a

multiple challenge in terms of morbidity and health care costs. Existing evidence ascertains the important role of Matrix metalloproteinases (MMPs) and their tissue inhibitors TIMPs in wound healing. Imbalance of MMPs in the DFU microenvironment has been associated with poor wound healing. Current research is directed towards the development of novel therapeutic agents that could redress the imbalance of MMPs/TIMPs. Poly Hydrated Ionogens (PHIs) formulation is based on metallic ions and citric acid. PHI application aims to positively restore MMP ratios within chronic wounds. This initial multi-centre pilot study aimed to investigate the efficacy of the PHI formulation in achieving stable wound closure in recalcitrant DFUs. METHODS: 20 patients with therapy resistant DFUs of at least 2cm² and 3 months duration were treated with PHI formulation in an acetate carrier dressing. Wound debridement, digital imaging and wound perimeter tracing was performed weekly. Serum samples and punch biopsies were taken from random ulcers for quantitative MMP/TIMP analysis at three time points. Patient satisfaction was assessed with a questionnaire. RESULTS: Stable wound closure with high patient satisfaction was achieved in 15 (75%) DFUs. MMP/TIMP ratios within different healing phases were delineated. DISCUSSION: This pilot study's encouraging results prompt us to further investigate the PHI efficacy in DFU treatment in a multicentre, randomised controlled trial.

H 005 • EVALUATION OF TIELLE HYDROPOLYMER DRESSINGS IN THE TREATMENT OF DIABETIC FOOT ULCERS IN PRIMARY CARE

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INTRODUCTION. Tielle hydropolymer dressings provide a novel approach to moist wound healing management of chronic exuding wounds such as diabetic foot ulcers (DFU). METHODS. To evaluate the efficacy and tolerability of Tielle, three prospective, open, phase IV studies were carried out between 1996 and 2000 in primary care practices. Pooled results are presented. RESULTS: A total of 662 patients (49.2% females) with an average age of 62.4±16.8 years were included. Mean wound radius was 1.9±1.4 cm, median wound age 2 months (mean: 6.0). 46.7% of DFU were deep, 32.3% superficial; 56.7% showed signs of infection. In 43.8% and 12.7%, respectively, moderate and strong exudation was noted. Pretreatment included ointments, com-presses, or gauze in 88.4%, and hydrocolloid dressings in 10.3%. After median treatment periods of 36 (study 1 and 2) and 56 days (study 3) with Tielle, 51.5% and 59.0%, respectively, of DFU healed, 43.7% and 36.2% improved, and 4.6% and 3.3% were unchanged or aggravated. "Excellent" cosmetic results were obtained in 59.0% and 51.6%, "good" results in 33.7% and 48.4%, respectively. The number of bandage changes was halved to 2 changes per week. In comparison to previous treatment, the tolerability of Tielle was rated "much better" in 45.0% and "better" in 26.7% of subjects. Adverse events occurred in 2.2% of patients. DISCUSSION: Tielle hydropolymer dressings are very useful in the management of DFU as evidenced by high healing rates and excellent tolerability, thus improving patients' quality of life. Reduced rates of bandage changes with Tielle lead to cost-savings.

H 006 • IMPACT OF ISCHEMIA, INFECTION AND COMPLIANCE ON THE HEALING OF DIABETIC ULCERS

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INTRODUCTION: The amputation rate is very high on patients with diabetic ulcers. We investigated factors that interfere with the healing on a large patient population. METHODS: In our wound care center we treated 1192 diabetic ulcers. All patients were treated according to a comprehensive wound care program. In a special wound documentation program we documented at the first visit etiology, wound history and personal patient data, during treatment wound morphology, diagnostic procedures, compliance (excellent, good or bad) and local treatment. Life table analysis and Cox regression analysis has been used to evaluate relevant factors that interfere with healing. RESULTS: There were 34% neuropathic feet, 17% ischemic feet and in 49% of the patients neuropathy was combined with ischemia. The healing rate was calculated to 80% within one year. Patients were treated with minor surgical debridements (100%), major surgical debridements (35%) and bone resections (22%). In 10% toe amputations could not be avoided, the amputation rate of major amputation was 5%. The multivariate analysis revealed a high risk for non healing on patients with ischemic feet (p=0.0001), patients with wound infection (p=0.0001) and non compliant patients (p=0.0001). CONCLUSION: There is a big challenge for improving revascularisation and a better control of infection. On the other side we could show for the first time the importance of patient compliance in this fields. Special programs, improving compliance could be very useful.