

[EP251] COMPLETE HEALING WITH HAEMOGLOBIN SPRAY IN 5/6 NON-HEALING DIABETIC FOOT ULCERS THAT FAILED STANDARD CARE

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: Foot ulcers are slow to heal and are frequently further delayed by diabetes. The aim of the study was to evaluate the usefulness of haemoglobin spray in the treatment of non-healing foot ulcers.

Method: Patients with non-healing ulcers which had failed to improve despite standard care, had their wounds sharp debrided and cleansed. After cleansing with saline, a thin layer of haemoglobin spray was applied onto the wound area. Hydro polymer foams were used as secondary wound dressing.

Results / Discussion: The wounds of 4 patients (6 wounds in total) used the spray during a 6 month period. 4 wounds healed and 1 showed significant improvement. 3 of the patients had peripheral vascular disease where the vascular surgeon was deemed them not suitable for surgery.

Patient 1 - 2nd toe right foot 4mm x 5mm on 13.3.14 – 13.10.14 wound healed (60 applications)

Patient 2 – 1st metatarsal phalangeal joint right foot 2mm x 2mm on 3.4.14 – 15.5.14 wound healed (12 applications)

Patient 3 – medial side right 1st toe 14mm x 9mm on 24.3.14 – 28.7.14 wound healed (34 applications)

Apex of 1st right toe 6mm x 9mm on 24.3.14 – 26.6.14 wound healed (27 applications)

Patient 4 – Posterior right heel 24mm x 78mm on 16.6.14 – 11.8.14 wound healed (16 applications)

Posterior left heel 22mm x 77mm on 16.6.14 – not resolved, treatment ongoing.

Conclusion: Haemoglobin spray might be an adjunctive therapy option for hard to heal ulcers to accelerate wound healing. Secondarily all patients reported a reduction in wound pain levels.

[EP253] THE ASSOCIATION BETWEEN SKIN AUTOFLUORESCENCE AND VASCULAR COMPLICATIONS IN CHINESE PATIENTS WITH DIABETIC FOOT ULCER: AN OBSERVATIONAL STUDY DONE IN SHANGHAI

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

The tissue accumulation of advanced glycation end products (AGEs) can be noninvasively assessed as skin autofluorescence (SAF) by the AGE Reader™ device. We aimed to detect the association between SAF and diabetes associated vascular complications in diabetic foot ulcer (DFU) patients engaged in this study. This cross-sectional survey consisted of 118 consecutive hospitalized diabetic foot patients. The diabetic microvascular (retinopathy, nephropathy, and neuropathy) and macrovascular refer to coronary heart disease (CHD), cerebrovascular disease (CVD) or peripheral vascular disease (PAD) complications were evaluated, and then they were divided into different subgroups based on the assessment of vascular complications. As the results, the mean SAF value was 2.8 ± 0.2 AU. SAF was significantly associated with diabetes duration and blood urea nitrogen (BUN) ($R^2=62.8\%$) ($P < 0.01$). Moreover, in the logistic regression analysis, SAF was significantly associated with retinopathy (odds ratio (OR) =40.11), nephropathy (OR=8.44), CHD (OR=44.31), CVD (OR=80.73), and PAD (OR=5.98E9). In conclusion, SAF, reflecting tissue accumulation of AGEs, is independently associated with the presence of vascular complications in DFU patients.

[EP254] INVESTIGATION OF FOOT RISK FACTORS AND SITUATION OF NURSING CURRENT IN DIABETES IN A CITY OF CHINA

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: To understand the impact of the callosity and other risk factors for foot ulcers in patients with diabetes and the situation of nursing current in diabetes.

Method: To investigate foot ulcers, the callosity , ingrown nails and other risk factors related to foot ulcers by anonymous questionnaire to hospitalized patients with diabetes in the city. At the same time, we also survey the situation of nursing current in diabetes by medical staff. Objects were diagnosed with type 2 diabetes (WHO, 1999). All patients including in the study were conscious, thinking normal, communicated normal, and the investigation was under the principle of voluntary.

Results / Discussion: Investigated a total of 210 cases of diabetes, and they were come from 15 hospitals. The number of foot ulcer was 34(16.4%). 101(48.6%) patients with foot callosity. 64(30.8%) patients had ingrown toenails disease. There are 3(1.4%) patients had received removing callosity or corns medical personnel to provide services, and there are 23(11.1%) patients had received medical staff to help deal with wounds.

Conclusion: The incidence of foot disease is very high in diabetes, but the proportion of received professional medical staff treated was low. It is urgent to improve the ability of prevention and treatment of high-risk foot disease in diabetes.

[EP255] EVALUATION OF A SKIN CARE PRODUCT IN THE TREATMENT OF XEROSIS IN PATIENTS WITH DIABETES

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: Xerosis affects the feet of many individuals. In people with diabetes Xerosis is common due to a number of intrinsic and extrinsic factors. This can lead to ulceration, infection and amputation.

Evaluation of this product in patients with Xerosis who are either at risk of, or suffer with, active diabetic foot disease as defined by SIGN. The outcomes for evaluation are satisfaction, improving Xerosis and subjective appraisal of product characteristics.

Method: Prospective observation study in 10 patients from the diabetic foot clinic. Informed consent was obtained. Images were taken at the start and completion of the study. Patients were instructed to use the cream twice daily on their feet. At the conclusion they were asked to evaluate the product.

Results / Discussion: 62.5% felt that the cream was not as good as their current product, 25% felt that it was better than their current product. 37.5% of respondents struggled to use the cream due to issues with packaging.

Practitioners noticed no difference in Xerosis post application. The product was well tolerated by patients.

Half the respondents felt that they had sufficient product to complete the testing period.

Conclusion: The difficulty of 37.5% of patients to use the product is concerning.

A larger comparison study is needed between this product and another similar product with an objective method of evaluation.

The authors feel that they can make no comments on the efficacy of this product.

[EP256] USEFULNESS OF A DIABETIC FOOT UNIT IN A REGIONAL HOSPITAL

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: Guidelines recommend screening and risk stratification of diabetic foot in order to prevent amputations. We have created a Diabetic Foot Unit (DFU) in our hospital which is composed by a multidisciplinary team with the coordination of a specialized nurse.

This study aimed to depict the characteristic of patients attending to the DFU and describe the nurse-directed patient flow after initial evaluation.

Method: Descriptive transversal study with inclusion of patients derived to our DFU from June to November 2014.

Patient data were collected at their first visit, including age, diabetes duration, and vascular and neurological feet exploration. Patients were classified according to their diabetic foot risk. Recent analytical data were also collected.

Categorical variables were described by frequency distribution and continuous variables by mean and standard deviation (SD).

Results / Discussion: 57 patients were included, aged 48 (SD 15.9) years. Mean diabetes duration was 16.4 (SD 10.3) years. Prevalences of hypertension and hypercholesterolemia were 43.8% and 40% respectively. Mean A1c was 7.7% (SD 1.53), with 17 patients (29.8%) having A1c above 8%. According to diabetic foot risk, 41 (72%) patients were classified as having a low risk, 7 (12%) moderate risk and 9 (16%) high risk. 4 (7%) patients were derived to Rehabilitation Service because of major deformities, 5 (8%) to Surgery Service because of peripheral arterial disease and 7 (12%) to Endocrinology Service because of painful neuropathy.

Conclusion: Despite of the short history of this project, the above results support the need and effectiveness of this program.

[EP257] PATHOLOGIC PATENCY ANALYSIS OF DESCENDING BRANCH OF LATERAL FEMORAL CIRCUMFLEX ARTERY

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: Descending branch of lateral femoral circumflex artery (DLFCA) has been reported to be useful for alternative arterial graft and pedicle of anterolateral thigh flap. But no pathophysiologic study to determine whether DLFCA is atherosclerotic resistant has been reported.

Method: We studied the morphologic characteristic of DLFCA and correlation of degree of atherosclerotic change. 17 perforator originated from DLFCA were selected.

Results / Discussion: All sections were classified according to American Heart Association (AHA) in six types of lesions. Seven sections contained an area stenosis of at least 25% and one section exceeded 50%. All sections were classified as type I.

Conclusion: DLFCA has only physiologic adaption in the intimal layer and no-relationship with atherosclerotic risk factors. Therefore, DLFCA is atherosclerotic resistant and surgeons need not hesitate about the condition of DLFCA.

[EP258] CLINICAL INVESTIGATION INTO THE USE OF A GELLING FIBRE DRESSING IN DIABETIC FOOT ULCER MANAGEMENT

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: To describe the results of a clinical investigation into the performance and safety of a gelling fibre dressing*. This dressing* is designed to transform into a gel on contact with exudate, thereby maintaining a moist wound environment that is conducive to the healing process, managing excess exudate, and facilitating non-traumatic removal.

Method: The evaluation took the form of a multi-centre non-comparative investigation. Subjects with a diabetic foot ulcer (DFU) who satisfied the inclusion/exclusion criteria for the investigation were treated with the gelling fibre dressing* for up to 12 weeks. Dressing changes were undertaken in accordance with routine care provided by the participating centres. Variables assessed at dressing changes included: condition of the peri-wound skin, pain on dressing removal, wound status, technical performance and clinician/patient opinion on the dressing*.

Results / Discussion: The use of the gelling fibre dressing* was associated with healthy, intact peri-wound skin, minimal pain at dressing changes, and good wound healing response. The dressing* was rated highly by both clinicians and patients against a number of parameters including ease of application and removal.

Conclusion: The findings of this study demonstrate the ability of the gelling fibre dressing* to effectively manage the considerable quantities of exudate typically associated with the DFU. Larger studies would help to fully explore the clinical and patient-related benefits of this new dressing on a range of different wound types.

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[EP259] DIRECT REVASCULARIZATION ACCORDING TO THE ANGIOSOME MODEL (AM) PREVENTS MAJOR AMPUTATIONS AND INCREASES LIFE EXPECTANCY IN PATIENTS WITH CRITICAL LIMB ISCHEMIA (CLI) AND DIABETIC FOOT ULCERATION (DFU).

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: The role of AM as a guide for revascularization procedures is debated. We evaluated whether direct or indirect revascularization, according to AM, affects clinical outcomes in type 2 diabetic patients (T2DM) with CLI undergoing percutaneous trans-luminal angioplasty (PTA).

Method: We retrospectively evaluated 445 consecutive successful lower limb PTA performed in 370 T2DM (M/F: 257/113; age: 73.5±9.3 yrs; BMI: 27.4±4.8 Kg/m²; diabetes duration: 21.4±12.8 yrs; HbA1c 7.8±1.6%) admitted to our department for CLI and DFU. Patients were divided into 2 groups: direct (DG - 266 pts, 72%) or indirect (IG - 104 pts, 28%) depending on whether the flow to the artery directly feeding the site of ulceration, according to the AM, was successfully acquired or not. No significant differences were observed between the two groups regarding main clinical characteristics. Ulcer healing (HR), major amputation (MA) and death (D) rates were compared in the two groups during a follow-up of 18.9±12.4 months (range 0.7-43.2 months).

Results / Discussion: HR was 68% in DG vs 52% in IG ($\chi^2 = 9.6$; $p < 0.05$). MA rate was 11% in DG vs 4% in IG ($\chi^2 = 9.4$; $p < 0.02$). Cumulative mortality rate during follow-up was 14% in DG and 27% in IG ($\chi^2 = 8.7$; $p < 0.02$).

Conclusion: Our data show that direct revascularization of arteries supplying the DFU site results in higher healing rates and lower amputation and mortality rates compared to the indirect one. Thus, AM should be pursued in diabetic patients with DFU whenever PTA is chosen as revascularization procedure.

[EP260] ANALYSIS OF THE CHARLSON COMORBIDITIES INDEX IN DIABETIC FOOT (DF) PATIENTS AND ITS CORRELATION WITH LONG-TERM OUTCOMES.

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E-poster session: Diabetic Foot

Aim: The Charlson Comorbidity Index (CCI), a score composed by 19 different chronic pathologies, is the most widely adopted comorbidity index for predicting mortality. We evaluated CCI in DF patients and checked its correlation to mortality and long-term outcomes.

Method: We retrospectively calculated CCI in 638 type 2 diabetic patients (M/F: 460/178; age: 68±11 yrs; BMI: 27.8±5.0 Kg/m²; diabetes duration: 19.8±12.3 yrs; HbA1c 7.9±1.8%) consecutively admitted (2011-2014) in our department for DF. Main clinical outcomes (healing rate, major amputation and death) were evaluated during a follow-up of 18.9±12.4 months (range 1.7-43.2 months) and correlated with the CCI score.

Results / Discussion: The mean (SD) CCI score in all patients was 5.2±1.6. Healing rate was 67.2% (N 429), whereas major amputation and mortality rate were respectively 5.2% (N. 33) and 19.5% (N. 84) during follow-up. CCI was significantly lower in healed patients than in non-healed ones (5.1±2.5 vs 5.8±2.1, p< 0.02). A significantly higher CCI score (6.1±2.3 vs 5.1±2.3, p<0.02) was observed in dead patients. No significant difference was found in patients who underwent major amputations (5.5±2.6 vs 5.2±2.5, p=ns).

Conclusion: CCI was very high in diabetic patients admitted in our department for DF problems and correlated with healing and mortality rates, stressing the role of the systemic involvement in this patients, and suggesting its possible predictive value not only for mortality, but also on long-term outcomes.

[EP261] CONSERVATIVE SURGICAL TREATMENT OF INFECTED ULCERATION OF THE FIRST METATARSOPHALANGEAL JOINT WITH OSTEOMYELITIS IN DIABETIC PATIENTS

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E-poster session: Diabetic Foot

Aim: Ulceration of the plantar aspect of the first metatarsophalangeal joint is a common localization in diabetic foot. Conservative treatment of this lesion is a challenging problem and is carried out through soft tissues and bone debridement.

Method: In a cohort of 28 diabetic patients affected by diabetes mellitus and first ray lesion penetrating the bone, after surgical debridement with removal of the infected bone we have positioned antibiotic loaded bone cement and stabilized the treated area with an external fixator. All neuroischemic patients had the vascular disease treated before the procedure.

Results / Discussion: The mean follow up was 12.2 ± 6.9 months. Four patients developed a relapse of ulceration after the procedure. In the postoperative period, 1 (3.57%) patient had a dehiscence of the surgical site and underwent a second procedure. In the follow-up period, 2 (7.14%) patients had bone cement dislocation. In one of these patients, a new ulceration was observed dorsally to the surgical site. The approach was surgical revision with bone cement replacement and stabilization with a new external fixator. In the other case, given the absence of ulcerations, cement was removed and arthrodesis with internal stabilization by means of 2 cannulated screws was performed. One patient (3.57%) who had a relapse of ulceration following recurrent critical ischemia underwent percutaneous revascularization procedure and transmetatarsal amputation. At follow-up, no ulceration recurrences, transfer ulcerations, shoe-fit problems or gait abnormalities were detected in the other 24 patients.

Conclusion: Our study shows the results of a technique requiring a one-stage surgical approach to a relatively common problem, which is often hard to solve.

[EP262] A BUSY METROPOLITAN WOUND CARE CENTER HAS SUCCESSFULLY INCORPORATED THE GOLD STANDARD: TOTAL CONTACT CASTING TO HEAL CHALLENGING FOOT WOUNDS

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: Numerous randomized controlled trials validate TCC efficacy including healing rates of 89.5% in mean of 33.5 days.* Despite this overwhelming evidence, only 2% of patient visits utilized TCC to heal these wounds, according to Fife (2014).** This case series will describe 14 patients with neuropathic foot wounds that were healed using a Total Contact Casting (TCC) system.

Method: Fourteen patients with neuropathic foot wounds ranging from 4 weeks to 1 ½ years were treated with TCC. The clinic staff were educated on use of a prepackaged TCC system. Wound assessment, debridement and topical wound therapy were used based on moist wound healing principles.*** All foot wounds were successfully offloaded with TCC to the endpoint of healing.

Results / Discussion: All 14 patients achieved complete wound closure after implementation of TCC. Several wounds were healed in 4- 6 weeks. More complicated wounds took longer to heal as would be expected. This case series demonstrates successful treatment regimens involving neuropathic and other complicated foot wounds treated with TCC.

Conclusion: The outcomes are consistent with documented evidence using TCC for neuropathic foot wounds.

*Armstrong DG et al. Off-loading the diabetic foot wound. Diabetes Care 24:1019-1022, 2001.

**Fife CE. et al. Diabetic Foot Ulcer Off- Loading: The Gap Between Evidence and Practice. Data from the US Wound Registry. Advances in Skin and Wound Care Volume 27. No 7. 2014

***Bryant RA, Nix DP. Acute and Chronic Wounds: Current Management Concepts. 4th Edition. St. Louis, MO: Mosby Elsevier, 2012.

[EP263] OXIDATIVE STRESS AND INFLAMMATORY RESPONSE IN CHRONIC WOUND PATIENTS UNDERGONIC MULTIPLE HBO EXPOSURES: AN IN VIVO STUDY

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E-poster session: Diabetic Foot

Aim: The purpose of this study was to determine the effect of long-term repetitive HBO in patients with chronic wounds.

Method: Four patients with chronic wounds were involved in this preliminary study and exposed to repeated HBO sessions (at 2.4 ATA for 90 min). Blood samples were taken immediately after the exposure. Plasma antioxidant enzyme activities (CAT, GPx and SOD) and total ascorbic acid were measured as indirect markers of oxidative stress. Levels of pro- and anti-inflammatory cytokines were also measured to investigate the inflammatory response following repeated HBO exposures.

Results / Discussion: The findings demonstrated that long term-exposure to HBO significantly decreases the antioxidant enzyme activity (CAT and SOD; *t*-test, $P=0.0002$ and 0.045 , respectively), pro-inflammatory cytokines (TNF- α and IL-6; *t*-test, $P=0.017$ and 0.001 , respectively) with down regulation of NF- κ B and Bcl-2 in both stimulated (*t*-test, $P = 0.0003$ and 0.00006 , respectively) and unstimulated neutrophils (*t*-test, $P = 0.00013$ and 0.00036 , respectively).

Conclusion: the prolonged HBO treatment induces immunosuppressive effects that seem to affect in particular the response of the enzymatic antioxidants defences and ascorbate levels, such that paradoxically HBO exposure may result in lowered oxidative stress. Further studies should focus on the molecular mechanisms that can be activated during the HBO exposure and whether the changes in enzyme activity result from chemical modifications caused by reactive oxygen species or from changes in expression of the proteins.

[EP264] THE FIRST EXPERIENCE WITH NEW COMBINED SELF-ADHERENT ANTIMICROBIAL WOUND DRESSING IN DIABETIC WOUNDS

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E-poster session: Diabetic Foot

Aim: Positive effect of hyaluronan iodine complex was presented in several studies during several preceding years. Moreover, we demonstrated an augmentation of this effect by concomitant negative pressure therapy. The new hyaluronan-octenidine (HO) wound dressing combines high adherence due to absorption core with hydrophobic and healing effect of hyaluronan and with antimicrobial effect of octenidine. The aim of present study was the first assessment of this bandage on difficult-to-heal diabetic ulcerations.

Method: The observation study was done on 12 subjects with non-healing diabetic foot ulcers with high risk of amputation were due the failure of usual therapy. Patients with gangrene due to arterial occlusions were excluded. The HO dressing was placed directly to the wound; then the wound was covered by several layers of dry sterile gauze. The gauze was changed daily whereas HO dressing was changed 2-3 times per week. Wound diameter, and characteristics as well as dressing frequency and length of treatment were recorded. The wound pictures were taken by digital camera each second week.

Results / Discussion: The new HO based wound dressing adhered properly to wound bed. The positive effect was apparent in all patients. The newly formed granulation tissue was apparent within 2.4 ± 1.2 weeks. After 6 weeks the wounds were fully healed in 4 persons. Wound area decreased significantly (by $51.3 \pm 25.2\%$) in other 8 patients. No side effects were recorded during the study.

Conclusion: The new HO based adherent wound dressing based on improved drainage system and combination of hyaluronan and octenidine is promising method for treatment of diabetic ulcerations.

This study was supported by the program PRVOUK P37/12 Czech Republic

[EP265] COMBINATION OF 'HYDROTULLE" BANDAGE AND VACUUM THERAPY SYSTEM IN CASE OF AUTOPLASTY IN PATIENTS WITH THE NEUROISCHEMIC FORM OF DIABETIC FOOT

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: To study the influence of negative pressure vacuum therapy (NPVT) on free transferred skin graft in patients with the neuroischemic form of the diabetic foot syndrome (DFS).

Method: All the patients with the purulent necrotic complication of DVS had treatment course in the hospital in 2014 and were divided into 2 groups: 10 patients in the main group and 12 patients in the comparison group. The main criterion of the clinical efficiency of the used method was the percentage of engraftment of the transplanted free split skin grafts. In the main group we covered the transplant by bandage* and NPVT system** was used with the constant pressure 80 mm Hg, and in the comparison group only a bandage* was used.

Results / Discussion: We got the following operation outcomes: in the main group the percentage of engraftment of transplanted grafts was 91.52 ± 7.64 and in comparison group 81.36 ± 8.6 ($p=0.01$). We found the total lysis in none of the patients. The minimal percentage of engraftment was in 6 (50%) patients in the main group and in 4 (40%) in the comparison group. The total healing of the wound surface was on average in 12 days in the main group, and in 16 days in the comparison group.

Conclusion: Autoplasty results gave us a possibility to distinguish the main factors promoting skin graft engraftment in patients with the DFS: a proper preparation of the wound surface, diabetes subcompensation, the technique of autoplasty, using a hydrogel ointment bandage* in combination with NPVT.

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[EP266] A WOUND HEALING RATE IN DIABETIC FOOT ULCERS IN RESPONSE TO TREATMENT WITH MULTIDEX WOUND DRESSING IN OUTPATIENT DIABETIC FOOT UNIT CAJA DE SEGURO SOCIAL CIUDAD DE PANAMA. A CASE SERIES REPORT

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: A hydrophilic Maltodextrin NF wound dressing* is an advanced wound care dressing with several characteristics that decrease the time required to heal diabetic foot ulcers compared to standard methods. Maltodextrin wound enhance the chemotactic and antibacterial proprieties identified sugar based dressing and that by including a small amount of ascorbic acid would increase the nutrients available in the wound bed to promote healing. Our objective was to determinate the wound healing rate in Diabetic Foot ulcers Wagner 2 – 4 in response to treatment with a hydrophilic Maltodextrin NF wound dressing* in a outpatient clinic after aggressive inpatients treatment.

Method: An observational case series. All patients were diagnosed with stage 2, 3 or 4 ulcers as characterized by Wagner scale. 20 patients that met the inclusion criteria were consented and enrolled in this study. Patients and family were taught to perform healings before were discharged. Once a week all patients were seen by the physicians on charge and a nurse, a digital photo was taken for a digital report at the total healing.

Results / Discussion: All patients were closed in a minimum time of 56 days and maximum 191 days. The smaller diameter was 5.022 cm and maximum 64,098 sq cm sq. They were treated at the outpatient clinic once a week to get your total.

Conclusion: A hydrophilic Maltodextrin NF wound dressing* powder is a primary dressing, inexpensive, has bactericidal activity, reducing the bacterial load and the amount of exudate in the short term, does not require a secondary dressing reducing costs for healing. The training provided to the family and patient with weekly medical supervision lowers cost and achieved involve the patient and family in their treatment.

*Multidex

[EP267] SEMI ELASTIC TOTAL CONTACT CAST AND GEISHA SHOE AS EXCELLENT METHODS OF OFFLOADING DIABETIC FOOT

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: Offloading or pressure redistribution is a key issue in healing patients with Charcot Osteoarthropathy (CO). In other types of diabetic foot syndrome (DFS) offloading also an important part in treatment and its lack often effectively inhibits the progress of ulceration healing. The main aim of the abstract is to show the superiority in foot pressure redistribution in DFU patients using semi elastic Total Contact Cast (seTTC) and semi elastic shoe named geisha shoe (GS), than other methods of offloading.

Method: We retrospectively evaluated all patients treated with DFU at our clinic paying special attention to the time needed to close the ulceration according to the type of offloading.

Results / Discussion: The use of seTTC, joins the correct pressure redistribution and significantly deplete the friction around the sole with abilities of regular dressing changes based upon individual needs with no use of cast fenestration. Additionally, such a type of orthosis, unlike the situation when the foot is completely under stretched, generates very little pressure at foot bone, which plays an important role in the process of mineralization and stimulates microcirculatory in soft tissue and this causes inefficient reduction of edema and reduce healing time. In mid-foot and forefoot ulceration often GS are enough.

Conclusion:

1. In analyzed cases it was observed better healing time than in the others when different methods of orthopedic treatment was used by our clinic before.
2. As well seTTC as GS are cheap methods (the price of one-time set is 20-50 Euro), easy to supply and after short training can be easily put right after dressing application.

[EP268] USE OF TEAM RESOURCE MANAGEMENT TECHNIQUE TO IMPROVE CARE QUALITY IN DIABETES FOOTCARE TEAM

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: The implementation of aviation crew resource management technique can reduce medical error by improving safety climate and care quality.

Method: We organized a quality improvement team in a wound care centre. The interventions, including: briefing, employee care, and structural handover programs (ISBAR-I, situation, background, assessment, recommendation) were implemented.

Results / Discussion: The safety climate in the unit significantly improved. The examination of Ankle-Brachia Index rates drop from 0.604% to 0.052%, the main amputation rates drop from 0.14% to 0.32%, and the event severity reduced significantly. The completion of ISBAR handover rates improved from 60.25% to 92.46%.

Conclusion: We will continue to monitor and analyse the outcomes. We suggest early implementation of team technique to improve safety climate and care quality.

[EP269] TREATMENT OF HARD-TO-HEAL WOUNDS WITH THE LARVAE OF LUCILIA SERICATA

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E-poster session: Diabetic Foot

Aim: The aim of our study is to present the results of Maggot debridement therapy (MDT) applied in our center.

Method: In this study, all patients who treated with MDT in our chronic wound polyclinic between January 2013 - December 2014 were included. Larvae applications and dressing of the patients were photographed and the findings were noted into a form. The patients were divided into two groups according to their etiology because of the difference in responses to treatment. Group A included the patients with diabetic wounds, post-traumatic wounds and pressure wounds (bedsores). Group B included the patients with chronic venous insufficiency.

Results: A total of 22 patients were evaluated in the study. Group A included 14 patients (11 male, mean age 53.5±15years), Group B included 8 patients (6 male, mean age 48.3±19 years). The mean duration of wounds were 18 and 66 months in group A and B, respectively. Localizations of wounds in group A were soles of the feet in 4 patients, ankle in 5 patients, amputation stump in 4 patients, trochanter in 1 patient. Localizations of wounds in group B were thigh in 4 patients and ankle in 4 patients. Mean treatment cycles were 2.2 and 1.7 in group A and B, respectively. Treatment was early ended, respectively, in 3(21%) and 6 (75%) patients in group A and B ($p<0.05$), because of pain or worsening of wound. Improvement of wound healing were observed in 11 (79%) patients and only 1 (13%) patient in group A and group B ($p<0.05$), respectively.

Conclusion: In our study, maggot debridement therapy was found effective in the treatment of diabetic wounds, post-traumatic wounds and pressure wounds. But, wounds due to chronic venous insufficiency were unresponsive to maggot debridement therapy.

[EP270] RISK OF FOOT ULCERATION AMONG SAUDI PATIENTS WITH TYPE 2 DIABETES MELLITUS SUFFERING FROM PAINFUL DIABETIC NEUROPATHY.

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: To study the rate of the risk of foot ulceration (R-FU) in Saudi patients with type 2 diabetes mellitus (DM2) who have painful neuropathic symptoms (PNS), clinically significant painful diabetic neuropathy (PDN), and its relationship to the severity of PNS.

Method: A cross-sectional study was conducted on 366 Saudi patients with DM2 referred from primary health care centers to a diabetes center according to inclusion exclusion criteria. Informed consent obtained. PNS were assessed using neuropathy symptom-score (NSS). PNS was present if (NSS \geq 5). PNS severity determined according to scores of NSS: None (0-2), mild (3-4), moderate (5- 6), severe (7-9). Diabetic peripheral polyneuropathy (DPN) was determined using neuropathy disability-score (NDS). DPN was present if NDS \geq 3. The risk of FU was present if NDS \geq 6. Clinically significant painful diabetic neuropathy (PDN) defined as moderate symptoms and mild neurologic signs (NSS \geq 5andNDS \geq 3). SPSS17 was used for statistical analysis.

Results / Discussion: Mean age was 48.8 \pm 9.4 years. History of foot ulcer was present in 3.8% of patients. PNS were present in 54.1%. PDN was present in19.7%. The (R-FU) was present in 16.1%.The (R-FU) was significantly higher in patients with PNS compared to patients without PNS (1.78 \pm 0.42, 1.49 \pm 0.50) P< 0.0001. The (R-FU) was significantly higher in patients with PDN compared to patients without PDN (1.79 \pm 0.41, 1.08 \pm 0.27) P<0.0001. Patient with severe form of PNS had significantly higher (R-FU) compared to patients without PNS (-0.23 \pm 0.04) P< 0.0001.

Conclusion: Saudi Patients with PNS and with clinically significant PDN are at increased risk of FU. R-FU was highest among patients with severe form of PNS.

[EP271] FASTER HEALING WITH FISH SKIN ADM VS PORCINE ECM IN FULL THICKNESS WOUNDS, A RANDOMIZED STUDY

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: To verify the significance of observed faster healing with fish skin acellular dermal matrix (ADM) vs. porcine extracellular matrix (ECM), in full thickness acute wounds.

Method: 81 subjects with 162 full thickness wounds made with a 4mm punch biopsy instrument were randomized to receive treatment with either a fish skin ADM or a porcine small intestine submucosa derived ECM.

Results / Discussion: We have earlier reported the results of a study that showed fish skin ADM as non-inferior to porcine small intestine submucosa derived ECM. Results from a statistical analysis revealed significantly faster healing with the fish skin ADM. This might be of interest for those treating diabetic foot ulcers, because many of the positive effects of aggressive debridement are attributed to conversion of the chronic ulcer to a partially acute wound.

Conclusion: Wounds treated with the fish skin ADM healed significantly quicker than those treated with the porcine ECM.

[EP272] SCIENTIFIC EVIDENCE OF OXIDIZED REGENERATED CELLULOSE MATRIX WITH COLLAGEN FOR TREATMENT OF DIABETIC FOOT ULCERS: A SYSTEMATIC REVIEW

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: This study was a systematic review to investigate the scientific evidence of oxidized regenerated cellulose matrix with collagen (ORC+C) for treatment of Diabetic foot ulcer (DFU).

Method: This systematic review was developed with randomized controlled trials recruiting people with DFU treated with ORC+C, published in journals indexed in Pubmed, Lilacs and Scielo by the year 2014. Was used to PICO search strategy with MESH descriptors and retrieved articles were classified according to the Jadad Escala.

Results / Discussion: Were found 310 articles related to the topic were identified in PubMed, Lilacs and SciELO data. After reading full-text for analysis and evaluation of methodological similarity were included in the review 02 articles that reached a score equal to or greater than 03, according to Jadad scale. Coverages based on ORC+C seems to be effective in the inhibition of metalloproteinases in chronic wounds and an effective tool in the treatment of DFU. Articles evaluated separately showed that use of ORC+C leads to healing DFU of these, however, when we analyzed the methodological quality of these studies was noted the weakness of the methodology employed making the results questionable.

Conclusion: The studies showed it was not possible to conclude that the use of ORC+C matrix has higher cure rate for the treatment of diabetic foot. However there is a great scarcity and limitation of studies on this topic. This study suggests that other clinical trials of good methodological quality are performed focusing on the treatment of diabetic wound.

[EP273] NEGATIVE PRESSURE THERAPY IN TREATMENT OF PATIENTS WITH DIABETIC FOOT ULCER

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Thursday, May 14, 2015

E-poster session: Diabetic Foot

Aim: Negative pressure wound therapy (NPWT) becomes more common methods of wound healing. The aim of the study was to assess the process of wound healing in patients with diabetic foot.

Method: The study included 20 patients with type 2 diabetes with diabetic foot. The studied group was treated with NPWT (n=10) and control group conventionally (n=10).

Results / Discussion: Comparing to conventional treatment wound volume was smaller after NPWT. Similar observation referred to wound area size after NPWT treatment.

Conclusion: On the basis of this outcome the authors concluded that NPWT appears to be more efficacious than conventional treatment of diabetic foot ulcers.