

Accelerating the chronic wound healing process with a treatment combination of 100% Chitosan wound dressing and compression therapy.

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Introduction

To share the positive results in the treatment of chronic venous ulceration through use of 100% Chitosan wound dressing (MaxioCel®) in combination with compression therapy by a wound specialist nurse in a complex wound clinic.

Method

Case study series of patients with long standing chronic venous leg ulcers treated with a combination of MaxioCel and compression systems where previous treatment methods had proved unsuccessful. Following specialist clinical referral regular follow up appointments were scheduled and dressing change was performed. The following observations were recorded: - progression through the wound healing stages, level of oedema and pain alongside the impact of the ulcers on the patient's quality of life.

Results / Discussion

This case study series demonstrates wound progression until full healing was achieved. At each review a reduction in bacterial colonization, wound area reduction, reduced oedema as well as general amelioration was observed. Both clinical and patient feedback reflected an improvement of the wound at each review, which also included less pain and improved quality of life.

Conclusion

MaxioCel has properties of exudate absorption, antimicrobial and biofilm management and assists with haemostasis.

Multilayer & Inelastic compression are used in the treatment of chronic venous ulcers, and combined with MaxioCel supported successful outcomes in all cases for this patient group which included speed of healing, reduced pain and improved quality of life.

The author also notes that treatments for complicated wounds should be performed by a specialist nurse with multidisciplinary team support, with knowledge of new dressings and combination therapies enabling this information and best practice to be shared. This approach not only supports clinicians practice but may also bring enhancement and improvement of wound healing.

Case Study 1

78 year old male with venous leg ulcer of the right malleolus, for past 8 months.

Past medical history: Diabetes, Atrial fibrillation, Neuropathy. Patient had reduced mobility and used a walker frame, spending the majority of time seated in a wheelchair.

Previous treatment: VAC therapy and surgical debridement alongside courses of systemic antibiotics. Despite this his wound remained static and non healing.

Initial assessment: Wound dimensions, L7cm W3cm D0.5cm Wound bed 80% fibrin and 20% granulation with moderate exudate levels. Periwound skin macerated and wound malodorous. Unable to sleep due to wound pain, VAS pain score 4-6

Aim of treatment: Wound closure and exudate management. Reduce wound bioburden and encourage autolytic debridement - needed a dressing with antimicrobial properties.

During: MaxioCel commenced and dressing change every three days with a secondary foam dressing and 4 layer multilayer compression bandaging system.

VAS Pain score reduced to 2-3. Dressings and compression continued every three days.

Conclusion: Wounds much cleaner after 2 weeks, exudate levels subsided as did malodour. Wound fully healed. Patient commented that they had less pain and liked MaxioCel. QOL improved and he was able to sleep better.



Initial Assessment 1st June 2022



1st August 2022



19th September 2022

Case Study 3

76 year old male with venous leg ulcer right medial malleolus, 6 months duration.

Past medical history: Hypertension, renal failure, CA prostate, Inguinal Hernia, PVD. Independent and mobile.

Previous treatment: Antimicrobial Dressings, compression hosiery, antibiotics.

Initial assessment: Wound dimensions, L4cm x W3 cm x D0cm Fibrin slough, malodour and moderate exudate present. Patient unable to sleep, VAS pain score of 6.

Aim of treatment: Wound closure, management of exudate, management of suspected biofilm, relief of wound associated pain.

During: MaxioCel commenced. Dressing change every 3 days with multi layer compression therapy with no secondary dressing under compression. At mid point of treatment malodour had subsided and dressing changes were extended to every 4th /5th day. VAS pain score was 4 after 2 weeks, reduced to 2-0 during the remaining treatment and patient was able to sleep.

Conclusion: Wound had the potential to close and it appeared MaxioCel would meet the requirements of an ideal dressing in this case. Patient commented that he was able to sleep and that pain had reduced and he was pleased that the wound had completely closed.



2nd June 2022



18th August 2022



20th October 2022

Case Study 2

90 year old male with venous leg ulcer lateral left malleolus of 2 years duration.

Past medical history: AF, PVD, had wounds intermittently for nearly 60 years, mobile, mental deterioration.

Previous treatment: Iodine ointment, silver dressings, sharp debridement, systemic antibiotics, compression therapy but did not comply.

Initial assessment: Wound dimensions L9cm x W5 cm D0cm with fibrin slough, moderate exudate and malodour. VAS pain score 6-7.

Aim of treatment: The rationale was to use a different treatment that could manage the exudate and bioburden, prevent infection and facilitate wound closure.

During: Dressing changed every 2-3 days, secondary dressing superabsorbent polymer and multi layer compression therapy was commenced 2 weeks after initial assessment. VAS pain score 2-4 after 2 weeks with MaxioCel and then no pain at 8 weeks

Conclusion: Treatment aims were achieved and the wound was closed



Initial assessment: 30th May 2022



20th July 2022



20th October 2022

Case Study 4

73 year old male with left lateral venous leg (malleolus) 8 years duration.

Past medical history: PVD, Hypertension. Road traffic accident 2001. Independent & mobile. Dry and fragile skin condition and some skin sensitivities.

Previous treatment: Iodine dressings, compression hosiery, and antibiotics.

Initial assessment: Wound dimensions, L4cm x W2.5cm x D0.3cm, fibrin slough and very high exudate. Dressing change every 3 days with compression therapy. VAS pain score of 7.

Aim of treatment: Wound closure, management of exudate, management of suspected biofilm, relief of wound associated pain.

During: Dressing change initially weekly with MaxioCel and an inelastic compression bandage system. Compression therapy changed to multilayer compression and MaxioCel every 3 days with a superabsorbent polymer secondary dressing. During the last month of treatment the dressing regime returned to weekly. VAS score reduced to 4 on initiation of MaxioCel and continued to reduce until no pain was recorded by end of treatment. Exudate and bioburden were also observed to reduce significantly during the treatment period.

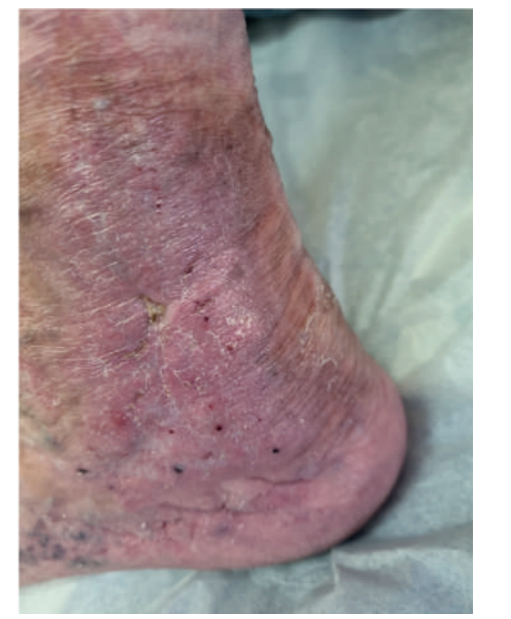
Conclusion: Wound healed but patient has an ongoing skin condition which makes skin fragile so continues to be monitored. This case had the potential to close and it appeared MaxioCel met the requirements of an ideal dressing. Patient liked MaxioCel as it reduced his pain and he was much more comfortable.



6th June 2022



5th September 2022



20th October 2022