Introducing an innovative Bioactive Microfibre Gelling(BMG™) technology across an acute vascular service: The clinical and patient benefits

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INTRODUCTION

730,000 adults (1.5% of the adult population of the UK) have a leg ulcer in one year.(1) As a major vascular surgical hub, our department is passionate in exploring new innovations in wound management. According to NICE (2016), dressings should provide the optimal environment for wound healing.(2) As a team we were given an opportunity to assess the clinical impact of a new innovative Bioactive Microfibre Gelling (BMG) dressing (MaxioCel®) to promote faster wound healing, improve patient experience, and shorten length of hospital stay for our patients.

METHOD

Upon gaining patient and trust consent we conducted a seven patient case study evaluation over 4 weeks to assess dressing characteristics, performance, and clinical impact.

RESULTS

1. A distinct dressing encompassing many features of multiple dressings which was also easy to apply and remove and very well accepted by both clinician's and patients.
2. Kick starts healing process – visible improvement in debridement in just a few dressings changes alongside a reduction in wound area and depth.
3. Exudate – dressing managed wound exudate levels resulting in an improvement in peri wound skin.
4. Haemostat –aided control of minor bleeding.
5. Patient comfort – patients reported less pain perception during treatment.
6. Economical - department able to save time and resources as dressing changes were reduced and patients were discharged earlier than expected into community care.
7. 100% clinicians stated they were happy to continue to use the dressing and recommend to other HCP's. Dressing performance recorded as good / very good across all assessed parameters.

CONCLUSION

BMG dressing (MaxioCel) demonstrated positive outcomes in this small patient evaluation. Further publication is planned from a health economic perspective due to the potential savings versus the market leading product of 35%, earlier discharge and saved bed days.

References: (1) Guest JF, et al Health economic burden that wounds impose on the National Health Service in the UK. BLM Open. 2015; 5: e009283. (2) Chronic wounds: advanced wound dressings and antimicrobial dressings, Evidence summary, Published: 30 March 2016, www.nice.org.uk/guidance/esmpb2

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CASE STUDY

40 year old female

Past medical history: Left Superficial Femoral Artery (SFA) angioplasty in Oct 2021 which re-occluded. Peripheral Vascular Disease, Infective endocarditis (Nov 2021), smoker.

Arterial ulcer at the dorsum of the left foot

- Ulcer started Feb 2021 secondary to trauma (son's pram fell onto patient's foot). Ulcer improved, until a dog jumped on the left foot and the ulcer worsened.
- Low to medium level of serous exudate.
- Patient's perception of wound pain level 8 (VAS)

02.11.22

Previous medical interventions

Multiple intervention radiology revascularisation procedures:

- **12.10.21** - Left angio antegrade femoral angioplasty
- **18.07.22** - Left infra-popliteal angioplasty
- **26.08.22** - Left SFA bovine patch angioplasty
- **02.11.22 - 6.11.22** - Iloprost infusion

Feb '21 – Oct '22 -Different dressings were used most often povidone-iodine (Inadine®) or gelling fibre (AQUACEL®), regularly being changed in the community by the practice & district nurses and by the ward nurses when inpatient.

10.11.22

MaxioCel commenced

With aim of treatment to protect granulation tissue, manage exudate, and promote healing.

Wound healing progression

Wound was cleaner and drier after using MaxioCel dressing. Patient reported reduction in wound pain, perception reducing from 8 to 2 (VAS). Serous exudate reduced.

Patient was discharged and MaxioCel used until 19.11.22. A simple dressing (Softpore®) was then used for final three weeks until wound was taken through to healing.

24.01.23

Key Clinical Benefits

1. Wound improved faster than expected, able to discharge the patient earlier and hand over continuity of care to the community nurses.
2. Very easy to apply (dressing could be folded) and to remove in one piece.
3. Wound became cleaner and drier, much less serous exudate.
4. Cost and time efficient due to reduced number of dressing changes required.

Key Patient Benefits

1. Patient's perception of wound pain level was lowered from 8 to 2 (VAS).
2. Patient was very happy with this dressing as it was more comfortable / less painful compared to the previous dressings used.
3. Early discharge supported improvement in patients quality of life.

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