

Can monofilament fibre technology help in chronic wound overgranulation? A case study

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Introduction

The exact mechanism of overgranulation is unknown¹ but on occasions it can be a challenging wound care problem with its management steeped in myth and uncertainty. There are a number of factors that could initiate an overgranulation response¹, one of which is infection or biofilm. This led the author, when faced with a challenging case of overgranulation, most probably related to a potential local infection or biofilm, to try a monofilament fibre debridement pad* because of the evidence relating to successful biofilm management^{2,3}.

Method

Mr A is a 54 year old man who has had a recurring venous leg ulcer since 2010. He had a DVT in 1996, is a hepatitis B carrier and a known substance abuser currently on a methadone programme. He is independent and was normally managed with weekly four layer compression bandaging. Mr A had been known to remove the bandages and dressings before his treatment room attendance but when access to free transport was withdrawn it was decided, following discussion, a self-care approach was needed. His treatment continued in an adjustable compression wrap** foot and calf system.

The overgranulation was first noted in April 2019 (Figure 1) and was treated with a soft adherent dressing with poly-absorbent fibre, honey, povidone iodine and silver dressings with no effect (Figure 2). In August 2019 the treatment was changed to include debridement with a monofilament fibre debridement pad.

Exudate levels were high at the beginning of the new treatment regime and so initially the exudate was managed under the compression with a superabsorbent dressing***.

A holistic management plan was developed and discussed with the patient which placed Mr A at the centre of the care and was bespoke to his requirements.

Results

Results from three consecutive treatments demonstrated that by using a three step exudate solution, this complex chronic venous leg ulcer was successfully managed (Figure 3);

Step 1

Remove the reason for the high exudate – this was achieved utilising the monofilament fibre debridement pad with effective removal of devitalised tissue and bacteria from within the wound bed and biofilm disruption. This led to a steady reduction in overgranulation tissue over a 3 week period. It appeared to have a ‘kick start’ effect and the chronic wound moved onto a healing trajectory.

Step 2

Absorb and retain the excess exudate – this was achieved by using an effective and comfortable superabsorbent dressing underneath the compression system.

Step 3

Compress to heal, full therapeutic compression therapy – this is a very important part of the overall management of venous leg ulcers. A discussion with the patient offering a choice of hosiery kit or adjustable wrap system led to a patient decision and full therapeutic compression was subsequently achieved using an adjustable wrap system allowing this independent patient to self-care.

Figure 1

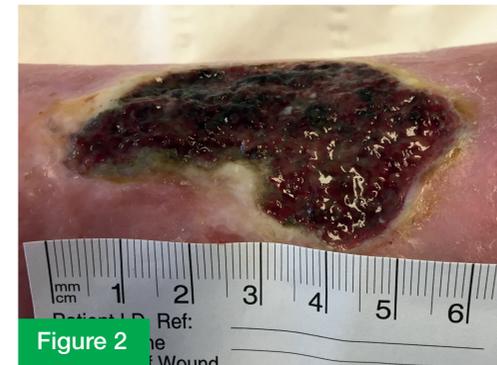


Figure 2

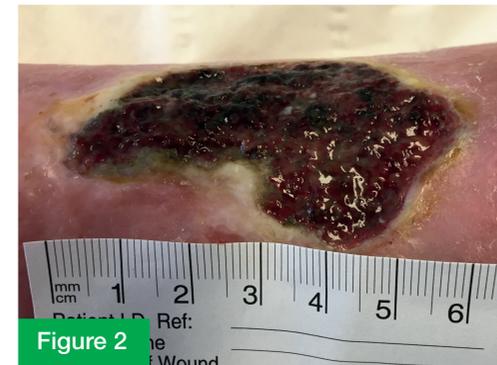


Figure 3

Discussion

The low prevalence of overgranulation makes it difficult to perform meaningful studies (in terms of patient population) from which to draw conclusive evidence on the cause and treatment of overgranulation⁴. In this situation a case study can be a useful way to disseminate potential treatment options for the future.

Conclusion

This case study demonstrates that in one patient the use of a monofilament fibre debridement pad worked effectively. It may be an interesting method of managing overgranulation in other similar cases of overgranulation that is thought to be caused by a potential local infection or biofilm. More evidence is required to decide if this treatment can be advocated to a wider audience.

References

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