

A review of monofilament fibre technology in the management of a variety of dermatological conditions

Clare Morris, Senior Clinical Services Manager, L&R

Aims

To review the evidence supporting the use of monofilament fibre debridement technology* in dermatological conditions.

Methods

Monofilament fibre debridement technology has been successfully used for 7 years in the debridement and management of chronic wounds¹ and hyperkeratosis². In recent years clinicians have been utilising the technology in specific dermatological skin conditions.

Results/Discussion

Monofilament fibre debridement technology has been shown in case studies and case series to be a useful emerging treatment, especially when self-care is a priority, in the management of dermatological conditions, for example;

- Varicose eczema^{3,4} (Figures 1, 2 and 3)



Figure 1



Figure 2



Figure 3 - before and after treatment with monofilament fibre debridement pad on 5 occasions over a 2 week period



Figure 4
Before and after 8 weeks of treatment with monofilament fibre debridement pad.



Figure 5



Figure 6
Before and after 4 minutes of treatment with monofilament fibre debridement pad.



Figure 7

- Epidermolysis bullosa⁵
- Chronic wounds in dermatological patients⁶
- Dry, scaly and flaky skin conditions^{7,8,9} (Figures 4 and 5)
- Hyperkeratosis associated with venous disease^{2,10}
- Secondary skin changes associated with chronic oedema and lymphoedema^{11,12,13,14}
- Actinic keratosis¹⁵ (Figures 6 and 7)

- Prior to photodynamic therapy¹⁶ (Figures 8 and 9)
- Acne vulgaris^{17/18}

The 18 million special monofilament fibres which have angled tips to reach uneven areas of the skin or wound bed, are able to remove unwanted tissue, materials and skin, allowing other concurrent treatment to reach their target area without the barriers imposed by for e.g. devitalised tissue, dry, scaly and flaky skin and other debris and materials.

This technology has received positive NICE guidance¹⁹ for use in acute and chronic wounds.

Monofilament fibre debridement technology is very soft, comfortable and gentle on patients. It is safe and easy to use and can also be used by patients for self-care.

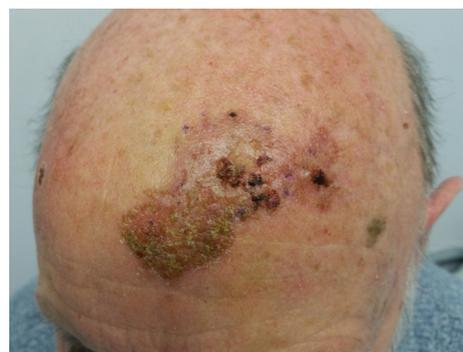


Figure 8



Before and after a few minutes treatment with monofilament fibre debridement pad'

Conclusion

A review of the available evidence clearly supports the continued research and interest in monofilament fibre debridement technology related to dermatological conditions.

References

1. Bahr, S et al (2011) Clinical efficacy of a new monofilament fibre containing wound debridement product. *Journal of Wound Care*. 20(5)
2. Wounds UK (2015) Management of hyperkeratosis of the lower limb: Consensus recommendations. London: Wounds UK, 11(4) Supplement.
3. Flinton, R (2011) A new solution to an old problem – an innovative active debridement system. Poster presentation, Wounds UK conference, Harrogate, UK
4. Girip L and McLoughlin A (2013) Safe debridement at home – a case study. Wounds UK conference, Harrogate, UK.
5. Denyer J (2013) The use of debridement pads in the management of children with severe Epidermolysis Bullosa. Poster presentation. EWMA conference, Copenhagen, Denmark.
6. Weindorf M and Dissemond J (2012) Wound debridement with a new debrider: A case report series about dermatological patients with chronic painful ulcerations of differing aetiology. EWMA conference, Vienna, Austria.
7. Unpublished data on file
8. Unpublished data on file
9. Lorenzelli D (2015) The management of skin conditions with monofilament fibre technology. Wounds UK conference, Harrogate, UK.
10. Whitaker J (2012) Self-management in combating chronic skin disorders. *Journal of Lymphoedema*, 2012, 7(1) 46-50.
11. Pidcock L and Jones H (2013) Use of a monofilament fibre debridement pad to treat chronic oedema-related hyperkeratosis. *Wounds UK*. 9(3) 89-92.
12. Williams A (2009) Chronic oedema in patients with CVI and ulceration of the lower limb. *British Journal of Community Nursing*. 14(10) S4-8.
13. Greaves T (2013) The value of collaborative working with industry in a community setting. Wounds UK conference, Harrogate, UK.
14. Harding C (2013) The management of a patient with bilateral lymphoedema and papillomatosis. Wounds UK, Harrogate, UK.
15. Heron A and Maginn G (2014) The impact of a monofilament debridement pad in the management of actinic keratosis. Wounds UK conference, Harrogate, UK.
16. Barea A (2016) Safety and efficacy on a monofilament fibre pad for superficial debridement prior to photodynamic therapy: a review of 20 cases. BDNG Annual conference, Bournemouth, UK.
17. Wiegand C et al (2017) Evaluation of the cleaning capacity of a monofilament debrider device compared to conventional cosmetic pads in a sebum model. Wounds UK conference, Harrogate, UK.
18. Eberlein T et al (2017) First experiences in use of a monofilament fibre pad in treatment of patients suffering from retentive and cystic manifestations of acne. Wounds UK conference, Harrogate, UK.
19. National Institute for Health and Care Excellence (NICE) (2014). The Debrisoft monofilament debridement pad for use in acute or chronic wounds. London: NICE. Available at: guidance.nice.org.uk/mtg17

*Debrisoft®/Debrisoft® Lolly – L&R

EWMA Conference, Krakow, Poland, 9-11 May 2018.