



The Use of Amelogenin in Pyoderma Gangrenosum

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Introduction

The concept of using extra cellular matrix (ECM) analogues as potential healing enhancers and carriers for growth factors has been described previously in several papers¹. Amelogenins are one of such ECM substitutes that have the advantage of an extensive clinical effectiveness and safety profile data when used in periodontal wound healing².

Materials and Methods

We present two female patients (age 45 and 63 yrs) with a recalcitrant pyoderma gangrenosum of the lower leg lasting for an average of 11 months, who were treated with the amelogenin gel (Xelma ®, Molnlycke, Sweden). The treatment was applied weekly under occlusion for a maximum of 4 weeks. The patients were receiving also a systemic treatment with immunosuppressors before and during topical therapy. (Fig 1, 2, 3, 4).



Fig. 1
Baseline
Patient 1



Fig. 2
After 4 weeks



Fig. 4
Baseline
Patient 2



Fig. 3
After 4 weeks

Results

The topical application of amelogenin was able to improve the two lesions in terms of pain control, wound bed granulation and wound size reduction after a short term pulsed therapy.

Discussion

In these case reports amelogenin has shown to be a valid concomitant treatment in the management of pyoderma gangrenosum. The therapy was well-tolerated and had no adverse effects. However, controlled studies are necessary, in order to determine whether amelogenin is a safe and effective product for this type of hard-to-heal inflammatory chronic wounds.

References

1. Gonzales M, Weksler B, Tsuruta D. *Structure and function of vimentin-associated matrix adhesion in endothelial cells*. Mol Biol Cell 2001; 12:85-100.
2. Vowden P, Romanelli M, Peter R et al. *The effect of amelogeninins (Xelma) on hard-to-heal venous leg ulcers*. Wound Repair Regen 2006 May-Jun; 14(3): 240-6.