

Full Thickness Wound Reconstruction After Wide Excision of Recurrent Plantar Fibromatosis

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INTRODUCTION

Plantar fibromatosis is a rare hyperproliferative benign lesion of the plantar aponeurosis with an unknown cause. Traditionally these lesions are managed with conservative care including, orthotic inserts, corticosteroid injections, anti-inflammatory drugs and physical therapy. When conservative treatment fails surgical options are offered for local excision of the lesion. Local surgical excision of these lesions has a very high recurrence rate ranging from 60-100% with wide excision thought to be associated with less recurrence rate [1]. When the fibroma involves the subcutaneous tissue, this is often resected, and primary closure is not an option. Here we present the use of ovine derived extracellular matrix (OFM) products in the reconstruction of plantar fibromatosis.

PATIENT HISTORY AND SURGICAL METHOD

60-Year-old male with history of recurrent plantar fibromatosis had undergone 3 prior surgical excisions. Patient underwent a wide excision (2 cm margins) of the recurrent lesions resulting in a full thickness defect ~15 cm x 8 cm x 1.5 cm, with an ~8 cm segment of exposed flexor tendon and exposed periosteum of the 1st MTP joint. The OFM graft[‡] was fixed directly into the defect for immediate coverage and subsequently temporized the defect via neodermal tissue formation. A small area of the defect was additionally managed with an OFM wound care device*. Defect granulation and epithelialization was monitored until closure and the final aesthetic and functional outcome was evaluated.

RESULTS AND DISCUSSION

OFM-based devices are available both as a multi-layer graft[‡] and as a single layer wound care device*. Granulation of the OFM graft was achieved by 10 days, except a small area over the MTP joint, that was additionally treated with twice weekly applications of single layer OFM device, for four weeks. The resulting robust, vascularized neodermis was suitable for skin grafting. Patient was satisfied with the outcomes achieved. The present case report highlights the use of an extracellular matrix graft and single layer graft for the reconstruction of a full thickness wound. While such dermal matrices do not supersede or replace flap procedures, they represent an alternative option on the reconstructive ladder in cases where flap procedures are not appropriate or possible, with the additional benefit of sparing the patient donor-site morbidity from flap reconstruction.

REFERENCES AND DISCLOSURES

[‡] Myriad Matrix, Aroa Biosurgery Limited, New Zealand, * Endoform Natural, Aroa Biosurgery Limited, New Zealand. Dr. Chaffin has a consultancy agreement with Aroa Biosurgery Limited. [1] van der Veer, W. M., S. M. Hamburg, A. de Gast, and F. B. Niessen. 2008. 'Recurrence of plantar fibromatosis after plantar fasciectomy: single-center long-term results', *Plast Reconstr Surg*, 122: 486-91.

