Revita: A Dermatological Excision Defect Case Report AS DESCRIBED BY DR. CALLAWAY I AUGUSTA, GA

INTRODUCTION

Nonmelanoma skin cancer is one of the most common forms of cancer among Caucasians, with the incidence rate increasing 10% annually.¹ Currently, there are 2-3 million new cases diagnosed worldwide per year.¹ Treatment options for NMSCs consist of varying excision techniques, including Mohs Micrographic Surgery, radiotherapy, topical antimetabolites, and more.¹

Excision of the carcinomas can result in defects varying in anatomic location, size, and depth. These wounds can present challenges to standard care techniques including risk of infection, wound dehiscence, cosmetic or functional distortion, and occasionally the formation of reactive keratoacanthomas.^{2,3,4}

Keratoacanthomas (KAs) are a benign form of skin tumors that share many epidemiological and histopathological features with squamous cell carcinomas (SCCs).⁴ While the tumors demonstrate rapid growth initially, they are typically characterized by tumor stability and regression over time.⁴ KAs most commonly present between the ages of 50 to 69 and are twice as likely to occur in the male population.⁴ KAs appear most commonly on sun exposed areas like the face, head, neck, and dorsum of extremities.⁴ The formation of KAs have been attributed to multiple causes including UV radiation, immunosuppression, and recent trauma or surgery to the location.⁴ Typical treatment for these tumors consists of an excision procedure.⁴

REVITA

The placental membrane is comprised of a layered extracellular matrix and natively contains hundreds of signaling components, like growth factors and cytokines.⁵ Placental membranes are commonly used as a wound covering due to these intrinsic components.⁵ Other native components that contribute to the appeal of placental membrane allografts as wound coverings include structural proteins like collagens, fibronectin, and laminin located in the extracellular matrix.^{5,6} Previously, commercially available membranes have retained only one or two of the native placental membrane layers. Revita, a dehydrated complete human placental membrane allograft, is the first commercially

available allograft to retain all three native layers; the amnion, intermediate layer, and chorion.^{5,7} Many of the signaling molecules in placental membrane can be found throughout all layers of the tissue.⁸ Specific structural components, like collagens and glycosaminoglycans, are found heavily concentrated in the intermediate layer.⁵

CASE REPORT

In June 2020, a 73-year-old white male with a history of hypercholesterolemia and hypertension presented with a squamous cell carcinoma on the dorsal arm. The SCC was excised; however, the patient developed a reactive keratoacanthoma shortly afterward.

Using standard Mohs techniques, the new lesion and entire original scar was removed. Due to the previous excision of the SCC, there was little laxity in the surrounding tissue, creating a high-risk environment for tissue ischemia and wound dehiscence if treated via primary intention. Given the depth and breadth of the new excision wound, Revita was determined to the be ideal wound covering while healing via second intent.

Revita was applied to the tissue defect where the KA and surrounding scar had been excised (Figure 1). One week after the initial application, the wound showed some contraction at the margins and the presence of healthy, red granulation tissue. Membrane remnants were still visible in the wound bed at 7 days (Figure 2). The wound was not debrided and another Revita allograft was placed over the wound. At day 14, the wound appeared pink and healthy with significant margin contraction. There were significant allograft remnants in the wound bed, which were not debrided out (Figure 3). A final allograft was placed on day 14, and the wound was resolved by day 21 follow up (Figure 4). The wound formed a slightly hypertrophic scar, however the patient declined additional treatment for it, stating that he was happy with the results.

DAY 0



Figure 1. Day 0, initial wound presentation.

DAY 7



Figure 2. Day 7, one application of Revita.





Figure 3. Day 14, two applications of Revita.



Figure 4. Day 21, three applications of Revita.

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