Use of CellerateRX Surgical, Hydrolyzed Collagen Powder on Radiation Burns

Dr. Alberto Castiel

Patient History

Patient was 76 years old with a history of peripheral vascular disease, Diabetes Mellitus Type II, and squamous cell carcinoma. The patient was diagnosed with squamous cell carcinoma to scalp in December 2013. He ultimately received 30 treatments of radiation in January 2014. Excision of lesions was performed in July 2014, with treatment of xeroform post op. Continued surgeries to remove cancer of the scalp were performed on August 25, 2014, December 5, 2014, February 3, 2015, and February 26, 2015. The wound was treated with Prisma, Grafix skin substitute, Prisma with Xeroform with no improvement.

Treatment

The patient was treated with Cellerate powder, beginning on March 24, 2015. Visits were weekly. 5g of CellerateRX Surgical powder was applied during each of the first four visits and 3g of CellerateRX Surgical powder was applied during each of the next three visits.

CellerateRx Surgical Powder conformed uniformly to the wound, absorbed excess exudate, formed a gel which protected exposed nerve endings reducing pain and provided the moist wound environment needed to support healing.

CellerateRx Surgical Powder is composed of amino acids. Those amino acids are liberated by wound macrophage proteases within the wound fluid, are chemotactic to migrating epithelium[1] and are taken up by the biological pool to contribute to the generation of new, proteinaseous, granulation tissue formation needed to support re-epithelialization.

Lastly, wound granulation tissue is composed of native collagen. Wound margin epidermal keratinocytes only migrate over hydrolyzed collagen and must produce collagenase to degrade the granulation tissue to hydrolyzed collagen prior to migration across the wound to complete closure. CellerateRx Surgical Powder is hydrolyzed collagen and its presence in the wound provide the friendly surface over which keratinocytes can migrate.

1 Li, et al, Low Molecular Weight Peptide Derived from Extracellular Matrix as Chemoattractants for Primary Endothelial Cells. Endothelium, Vol 11, 2004.

Rational for Treatment

Radiation dermatitis is one of the most common side effects of radiotherapy for cancer, especially patients with breast cancer, head and neck cancer, lung cancer, or sarcoma. Irradiation of the skin leads to a complex pattern of direct tissue injury involving damage to cells of the epidermis and endothelial cells within the walls of blood vessels, and inflammatory cell recruitment.

Free radicals produced in irradiated keratinocytes cause DNA damage and trigger inflammation, vasodilation, edema, and arrest cell growth, causing acute radiation dermatitis.

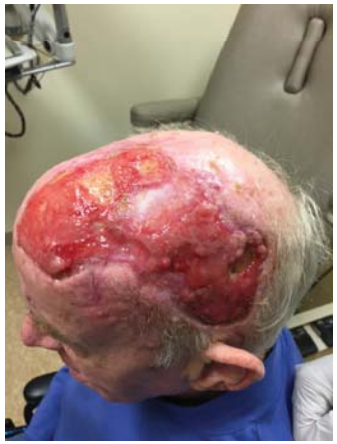
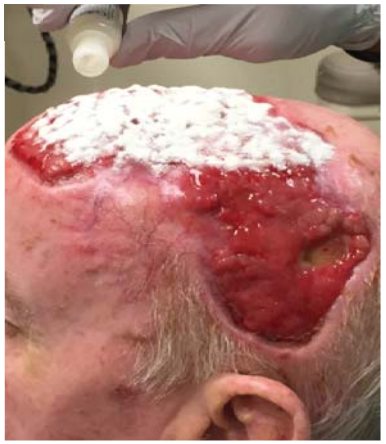
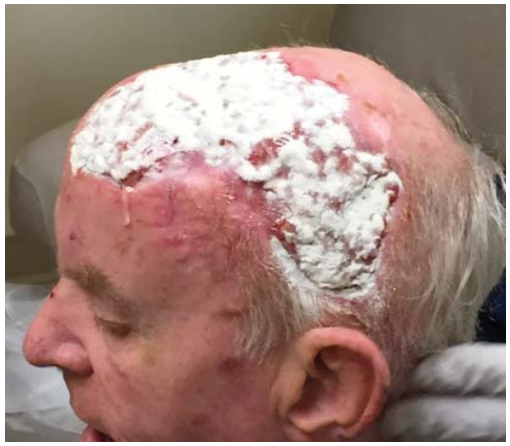
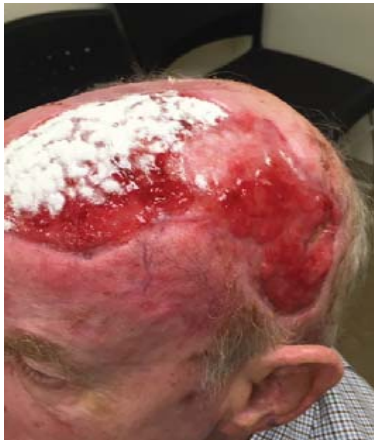
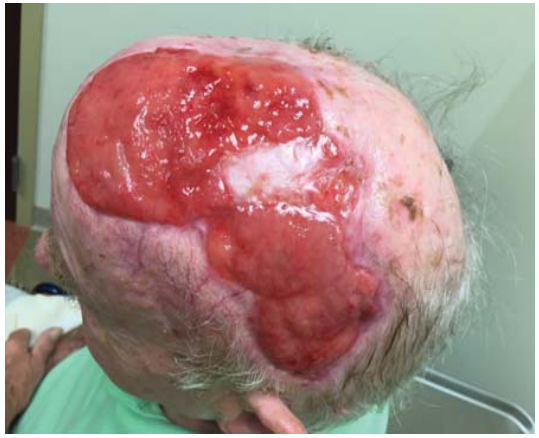
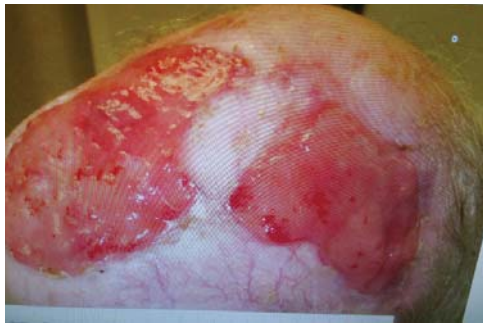
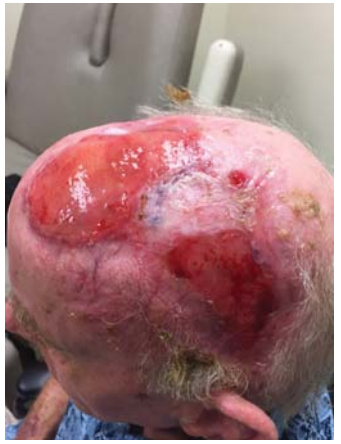
Although rare, patients are at increased risk for delayed wound healing, dehiscence, fistula, tissue graft failures, and other surgical complications within a radiation treatment field.

As many as 95% of patients treated with radiation therapy for cancer will experience a skin reaction.

Designed by Nature Activated By Science

CellerateRX® Surgical
ACTIVATED COLLAGEN® (CRX®)

Supporting Pictures

Wound CARE INNOVATIONS, LLC

a Wound Management Technologies, Inc. Company
www.wmgtech.com