CHORION KILLED THE RADIO (NECROSIS)

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ADVANCED Wound Therapy

INTRODUCTION

Radionecrosis is one of the most common side effects of radiotherapy treatment for cancer-affecting over 90% of patients receiving it. Several different modalities are used to encourage wound healing in these patients including hyperbaric oxygenation, emolliants, topical corticosteroids, and grafting.

METHODS

This case follows an 84-year-old female with a history of radionecrosis following removal of squamous cell carcinoma and subsequent radiation treatments to the right shin.

Patient first presented to wound care three months after irradiation with increased wound size and pain. Over a one-year period, patient underwent several treatments including topical corticosteroids, collagen, silver dressings, gentian violet and methylene blue dressings, aggressive debridement, two types of skin substitute grafts, and ten hyperbaric oxygenation treatments. Patient was unable to complete the full course of 30 approved HBOT treatments due to myopia.

During this time, the only significant change noted in the wound included an initial increase in exudate and devitalized tissue, followed by a significant amount of scar tissue which was sharply debrided over several weeks.

Only after introducing chorion and amnion grafts did the patient have a significant reduction in pain and wound size- with ultimate healing.

RESULTS

- 8/23/2023- Patient begins irradiation for squamous cell carcinoma (3 total rounds)
- 11/16/2023- Patient presents to wound care with complaints of significant pain and size increase. Large amount of slough, exudate, erythema present. 5.4 x 3.2 x 0.1 cm
- 2/5/2024- Gentian violet and methylene blue dressing used in conjunction with sharp debridement. Scar tissue present. 10 x 5 x 0.1 cm
- 3/29/2024- After utilizing gentian violet/methylene blue dressing, sorbact dressings, and collagenase,
- 5/8 2024-Began hyperbaric oxygenation and collagen derived skin substitute grafts
- 7/10/2024-After 10 HBOT dives, 10 collagen derived skin grafts, biopsy. 6 x 3 x 0.1 cm
- 8/5/2024-First application of DHACM
- 9/28/2024- 8 weeks od DHACM application
- 10/28/2024- DHACM completed, wound without drainage and completely re-epithelialized. 13 total applications
- 1/7/2025- Wound remains closed, patient is able to have knee replacement surgery

DISCUSSION

Dehydrated human chorion and amniotic grafts (DHACM) have many growth factors that are missing from injured tissues that aid in promotion of wound healing. DHACM was successful in treating this patient's pain and radionecrosis when other modalities failed.

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