Treatment of Stage IV Decubitus Ulceration in Spinal Cord Injury Patients with Skin Substitute, Icelandic Cod Skin: a Care Study

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BACKGROUND: Deep pressure ulcers (PU) secondary to spinal cord injury are among the most challenging conditions in public health, both to treat and to prevent. Approximately 1–3 million people in the United States (US) develop pressure ulcers each year. A meta-analysis including 600078 patients using random effects model showed that a global prevalence of pressure ulcers of 32.36% among patients with spinal cord injured(1)

CASE PRESENTATION:

50 year old male with known DMII, HTN, depression, Hx of T1 laminectomy with subsequent thoracic epidural hematoma casing complete paralysis distal to T1 since 2018. Late 2021 the patient developed a large stage IV sacral pressure ulceration that failed multiple simple wound care treatments. Early 2022 the patient was taken to the operating room for surgical debridement of the ulcer and has had multiple wound care treatment modalities since. However, short from closing the sacral ulcer he developed bilateral ischial stage IV ulcers as well.

For over 2 years the patient tried multiple modalities of wound care including debridement and application of other skin substitute matrix with no significant progression to closure despite addressing other factors such pressure distribution, DM control, nutrition, etc.

The patient underwent application fish skin matrix total of 3 times.

Main therapy immediately and after application of Kerecis has consisted of NPWT with silver impregnated sponge and the patient has limited sitting on his chair in short intervals, though he continues to chores in his farm. In addiion, the patient has used air-fluidized bed since the application of Kerecis to maximize healing.

Sacral pressure ulcer

First skin sub graft

08/28/2023



application

Second skin sub graft

05/06/2024. 02/10/2025

Left ischial pressure ulcer First skin sub graft Second skin sub graft application follow

05/06/2024.

01/29/2024.

07/13/2023. 08/28/2023.

Right ischium First skin sub graft application



08/28/2023



01/29/2024. 05/06/2024.



02/10/2025

DISCUSSION:

Closing pressure ulcers of this nature are challenging because of the multifactorial nature of this ulcers. The use of Icelandic fish skin matrix for this patient with chronic stage IV sacral ulcers that had not healed after multiple other wound care modalities demonstrated good progression to closure after treatment with fish skin graft.

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