Utilizing matrix allograft to cover open wounds without skin graft or flap coverage

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Introduction

Soft tissue coverage for traumatic defects is a challenge in orthopedics. Skin grafts, in particular, require tedious fixation and violation of the patient's donor area. We share our clinical outcomes in treating patients with sustained open wounds with a collagen-glycosaminoglycan matrix allograft.

Methods

Inclusion:
Patients with allograft used to cover fasciotomy sites, donor sites from flap coverage, or distal radius fixation sites deemed too swollen to primarily close were included.

Exclusion:
Pediatric patients and those without post-operative follow-up.

Follow-up:
Assessment of wound healing and need for grafting.

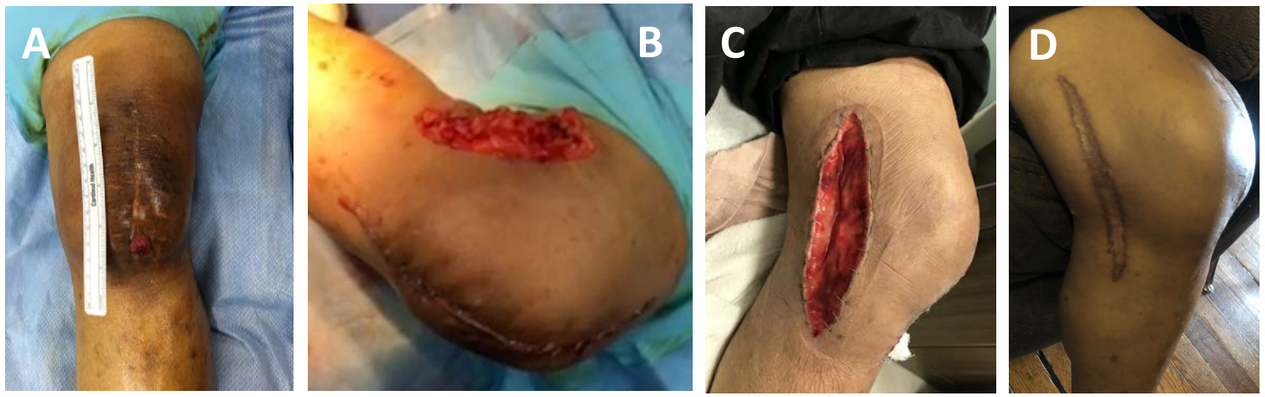

Figure 1. (a) Prior revision patella ORIF incision with chronic anterior knee wound (b) Bipedicle fasciocutaneous advancement flap performed to cover prior wound with a medial incision (c) Matrix allograft is placed over the medial incision. A vacuum-assisted closure (VAC) device is placed over the matrix allograft until follow up (d) Final wound healed without need for skin graft or flap

Figure 2. Elbow wound requiring a radial forearm flap 3.5 x 6 cm. The harvest site was then covered with matrix allograft. Healing of the wound noted after serial dressing changes

Results

- Total patients: 7 (3 female, 4 male)
- Median age: 63 years
- Median follow-up time: 3 months
- 7 forearms and 2 tibias
- Wounds ranged from 6 to 60 square centimeters
- By final follow-up, all wounds healed without need for subsequent skin grafting or flap coverage.

Conclusions

Biodegradable matrix allograft is a reasonable first option for providing a biologic scaffold to cover small to medium open wounds and may help prevent need for skin grafting and its associated morbidity.