

Carolyn Tsung,
Steven Tohmasi, MD, MPHS
Ariana Naaseh, MD, MPHS
Jennifer Yu, MD, MPHS
John P. Kirby, MD, FCCWS, FACS
Lindsay M. Kranker, MD, FACS

Department of Surgery
Washington University School of Medicine

Background

- Following grafting, allogeneic skin grafts trigger a strong host immune response that ultimately leads to graft rejection¹
- Chronic immunosuppression can prolong skin allograft survival in animal models²
- Skin allograft survival in immunosuppressed human subjects have yielded mixed findings, with some showing long-term survival of grafts³ and others showing contradictory results⁴
- We present two cases of patients on chronic immunosuppression after organ transplants who experienced delayed skin allograft failure on follow-up

Discussion

- Cadaveric skin grafts followed by STSG has been shown to be an effective strategy for managing complex wounds⁵
- Rat models showed that targeted immunosuppression may offer a safer alternative to long-term systemic therapy²
- Emerging therapies (e.g., cellular, acellular, and matrix like products), are being explored as alternatives to standard STSG to reduce the need for repeated operations⁶

If an abdominal organ transplant recipient is on chronic immunosuppression, will they reject a cadaveric skin graft?

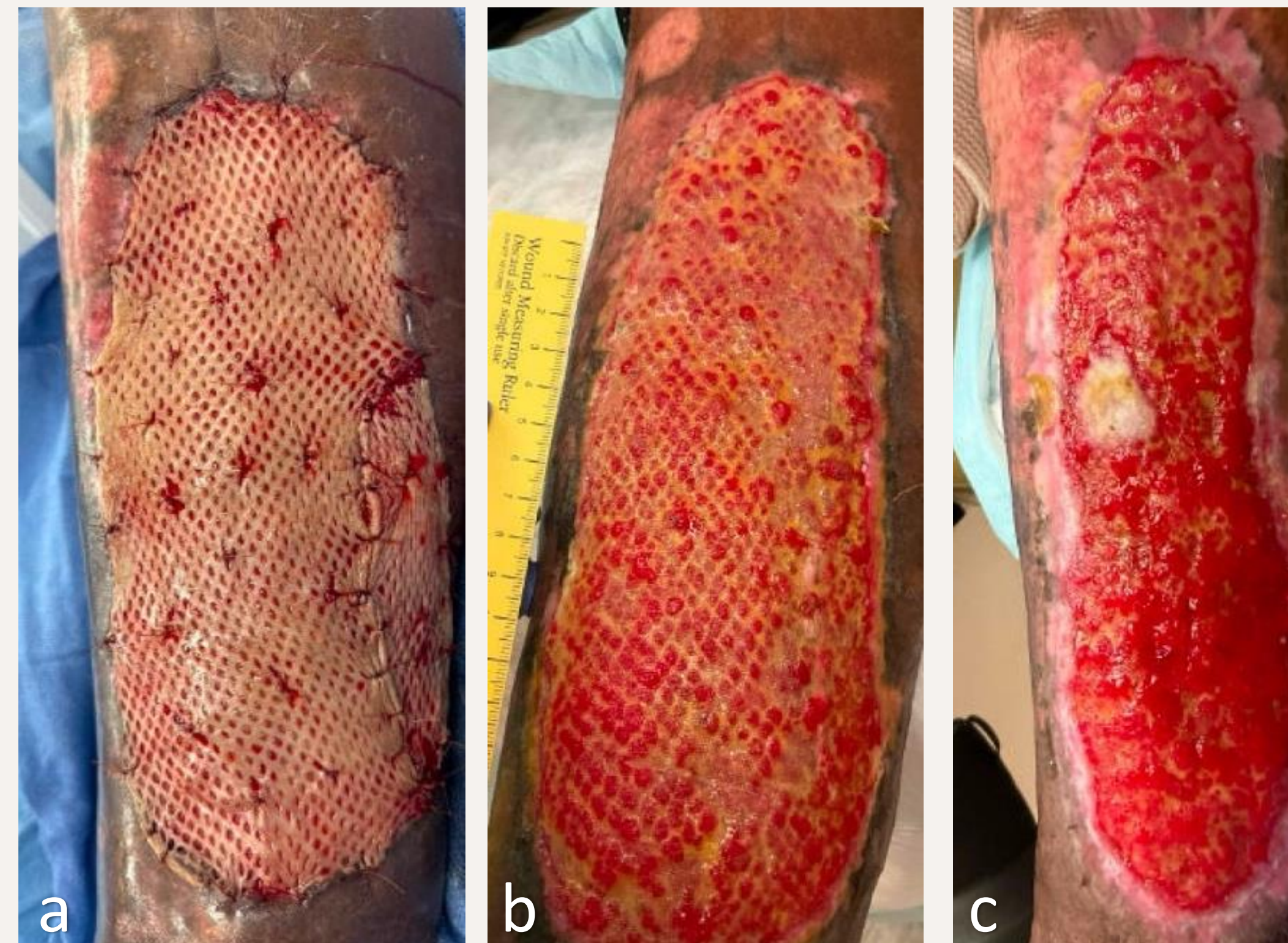
Short-Term: No, but Long-Term: Yes



PRESENTER
Carolyn Tsung
c.j.tsung@wustl.edu

Patient One

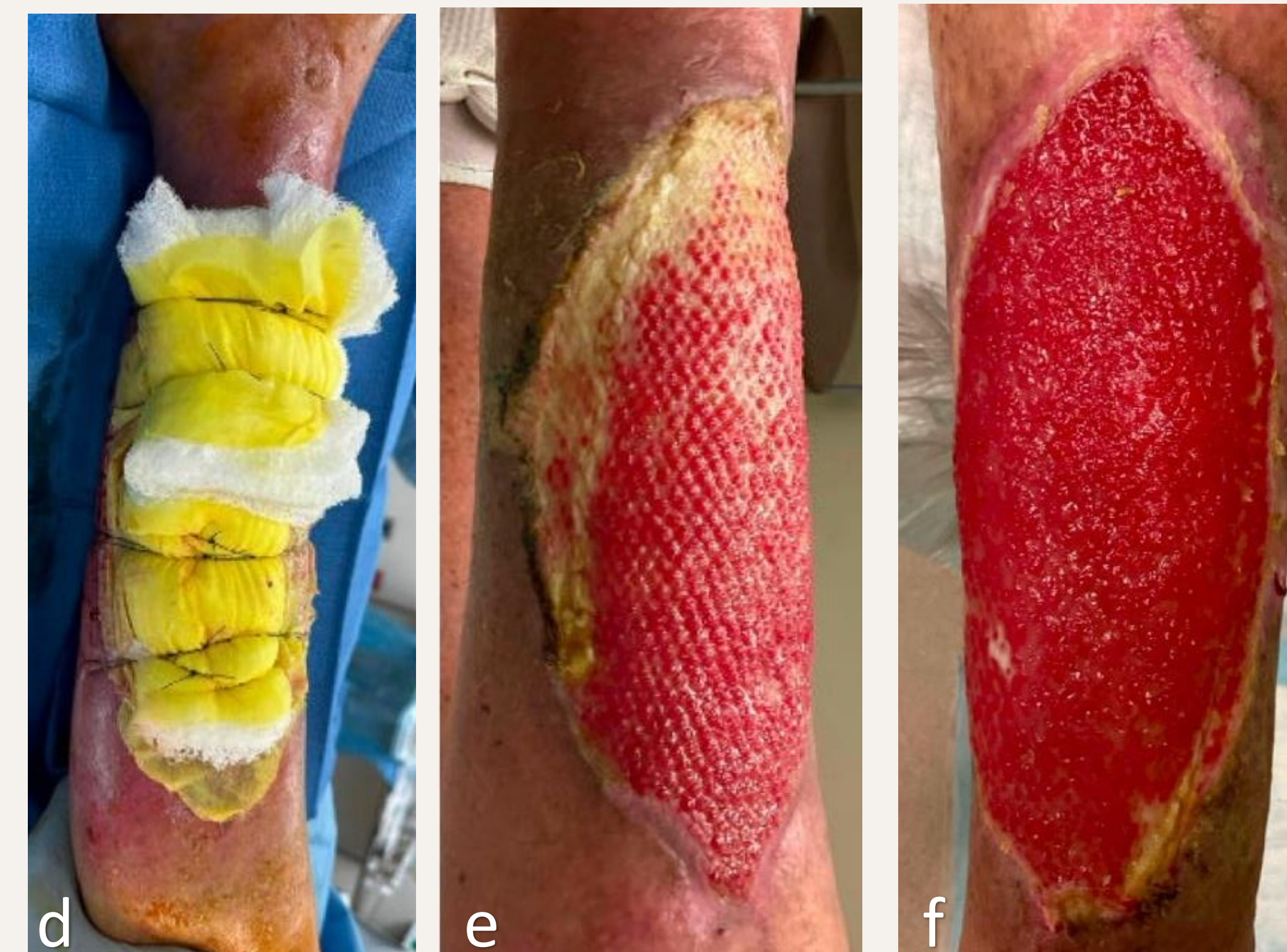
- A 59-year-old male presented with large hematoma with overlying skin necrosis on the left leg
- Medical history included Bell's palsy, hypertension, congestive heart failure, atrial fibrillation on warfarin, diabetes mellitus, end-stage liver and kidney disease status post liver and kidney transplantation



(a) Wound at the completion of the cryopreserved cadaveric skin grafting procedure. (b) Skin graft at two weeks post-procedure, showing adequate graft adherence. (c) Allograft demonstrating incremental disintegration at one month post-procedure

Patient Two

- A 62-year-old male presented with an infected, necrotic wound on the left lower leg
- Medical history included hypertension, diabetes mellitus, chronic obstructive pulmonary disease, and end-stage liver and kidney disease status post liver and kidney transplant



(d) Wound after cryopreserved cadaveric skin graft placement with overlying dressings. (e) Skin graft at two weeks post-procedure, showing adequate adherence. (f) Allograft at one month post-procedure, demonstrating partial disintegration with healthy granulation tissue.

Conclusions

- Both patients in our series declined further surgical intervention with STSG
- Cases underscore the challenges of managing complex wounds in immunocompromised patients and limitations of cadaveric skin grafting
- Variability in outcomes may be influenced by factors such as comorbidities, time since transplant, and immunosuppression regimen
- Extended follow-up of these patients after grafting is crucial
- Need for further research exploring alternative wound healing strategies

References

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