

INTRODUCTION

- Necrotizing soft tissue infections (NSTIs) are rare and rapidly progressive
- Only 2-10% of NSTIs affect the head and neck¹
- Mainstay of treatment for NSTI is surgical debridement, which can result in large defects requiring free tissue transfer^{2,3}
- When the defect is significant, one free flap may not provide enough coverage⁴

CASE PRESENTATION

- 75 year old female developed NSTI involving majority of the scalp after a fall with laceration



- Treatment
 - Serial debridement
 - IV antibiotics
 - Wound vac placement x 10 days
 - Latissimus dorsi/serratus anterior chimeric free flap based on subscapular system
 - Split thickness skin graft

INITIAL CARE

Post-debridement defect measuring 28x25 cm



Wound vac placement over defect



COMPLICATIONS

Soft tissue infection at flap edge



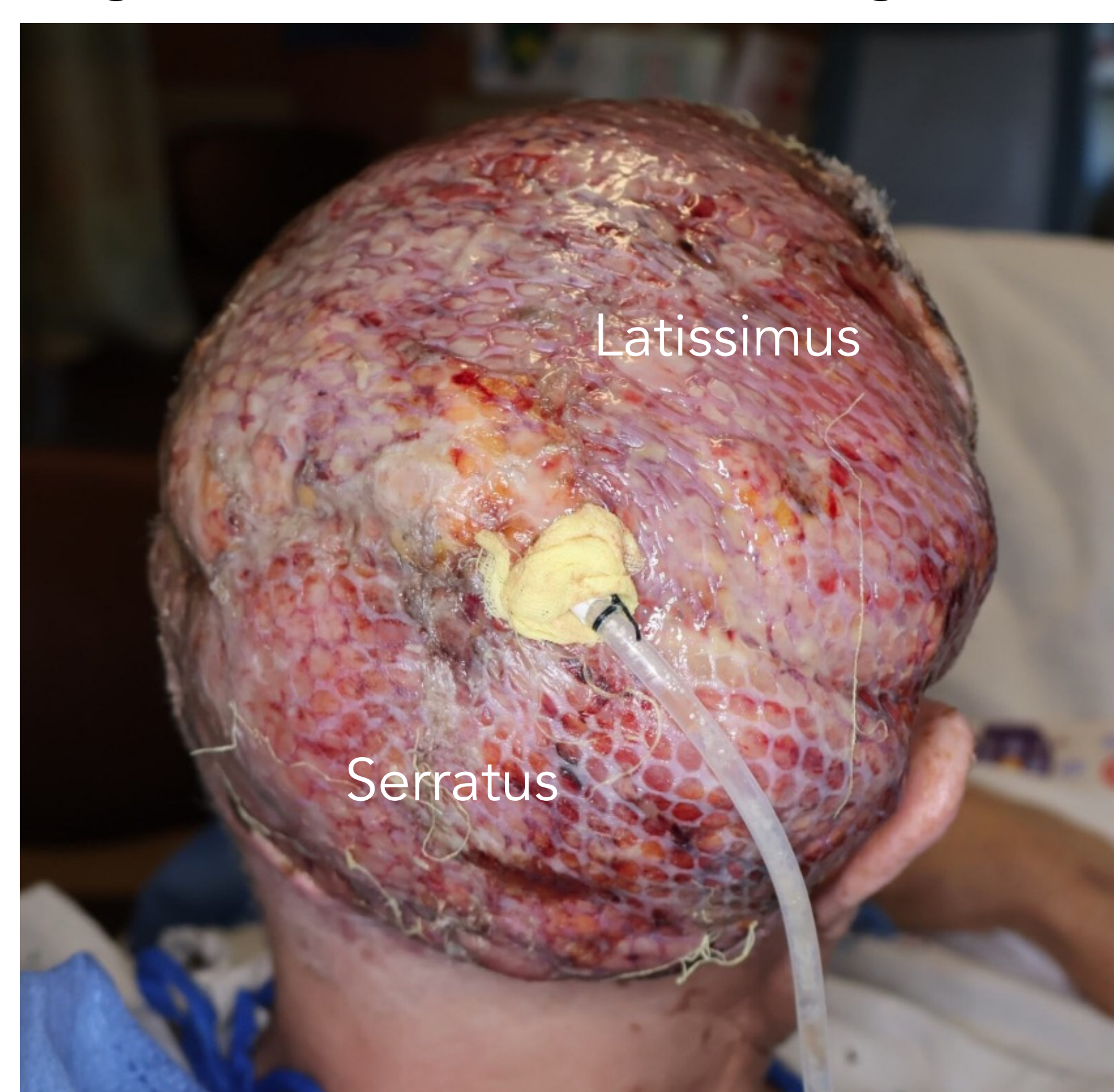
Debridement and wet-to-dry wound care



FREE TISSUE TRANSFER

Technique

- Cutting burr used to debride outer skull cortex
- Serratus muscle covered occipital region and latissimus rest of scalp
- Anastomosis to superficial temporal vessels
- Coverage with split thickness skin graft



CASE RESOLUTION

Status post split thickness skin graft, healed



A subscapular system free flap can provide multiple tissue options pedicled on one vessel to achieve wide surface area coverage following necrotizing soft tissue infection of the scalp

CONTACT

Alexandria Lichtl
Oregon Health & Science University
lichtl@ohsu.edu

REFERENCES

1. Goh, T., Goh, L., Ang, C., and Wong, C. (2014). Early diagnosis of necrotizing fasciitis. *Journal of British Surgery* 101, e119-e125.
2. McDermott, J., Kao, L.S., Keeley, J.A., Grigorian, A., Neville, A., and de Virgilio, C. (2024). Necrotizing soft tissue infections: a review. *JAMA surgery*.
3. Rapoport, N.A., Lee, D.S., Lee, J.J., Puram, S.V., Jackson, R.S., and Pipkorn, P. (2023). Eight tales of cervical necrotizing fasciitis and Free tissue transfer. *Annals of Otolaryngology, Rhinology & Laryngology* 132, 226-232.
4. Etttyreddy, A.R., Chen, C.L., Zenga, J., Simon, L.E., and Pipkorn, P. (2019). Complications and outcomes of chimeric free flaps: a systematic review. *Otolaryngology-Head and Neck Surgery* 161, 568-575.