

Epidemic Group A Streptococcus: A Multicenter Series of Periocular Necrotizing Fasciitis

Kryshtalskyj MT,¹ Schell C,² Lee-Wing M,³ Morin J,⁴ Ashenhurst M,¹ Morgenstern K,⁵ Burkat C,⁶ Byers B,¹ Punja KG¹

¹ Department of Surgery, University of Calgary ³ Department of Ophthalmology, University of Manitoba ⁵ Morgenstern Center for Orbital & Facial Plastic Surgery and Wills Eye, Philadelphia, USA
² Department of Ophthalmology, University of Saskatchewan ⁴ Quebec City, Quebec ⁶ Department of Ophthalmology, University of Wisconsin-Madison, USA

Introduction

- Jurisdictions across North America have reported a recent epidemic of GAS infections, with rates increasing by up to 77% since 2022.^{1,2}
- We report a multicenter series of aggressive periocular necrotizing fasciitis (NF), and the diverse techniques used to debride and reconstruct.

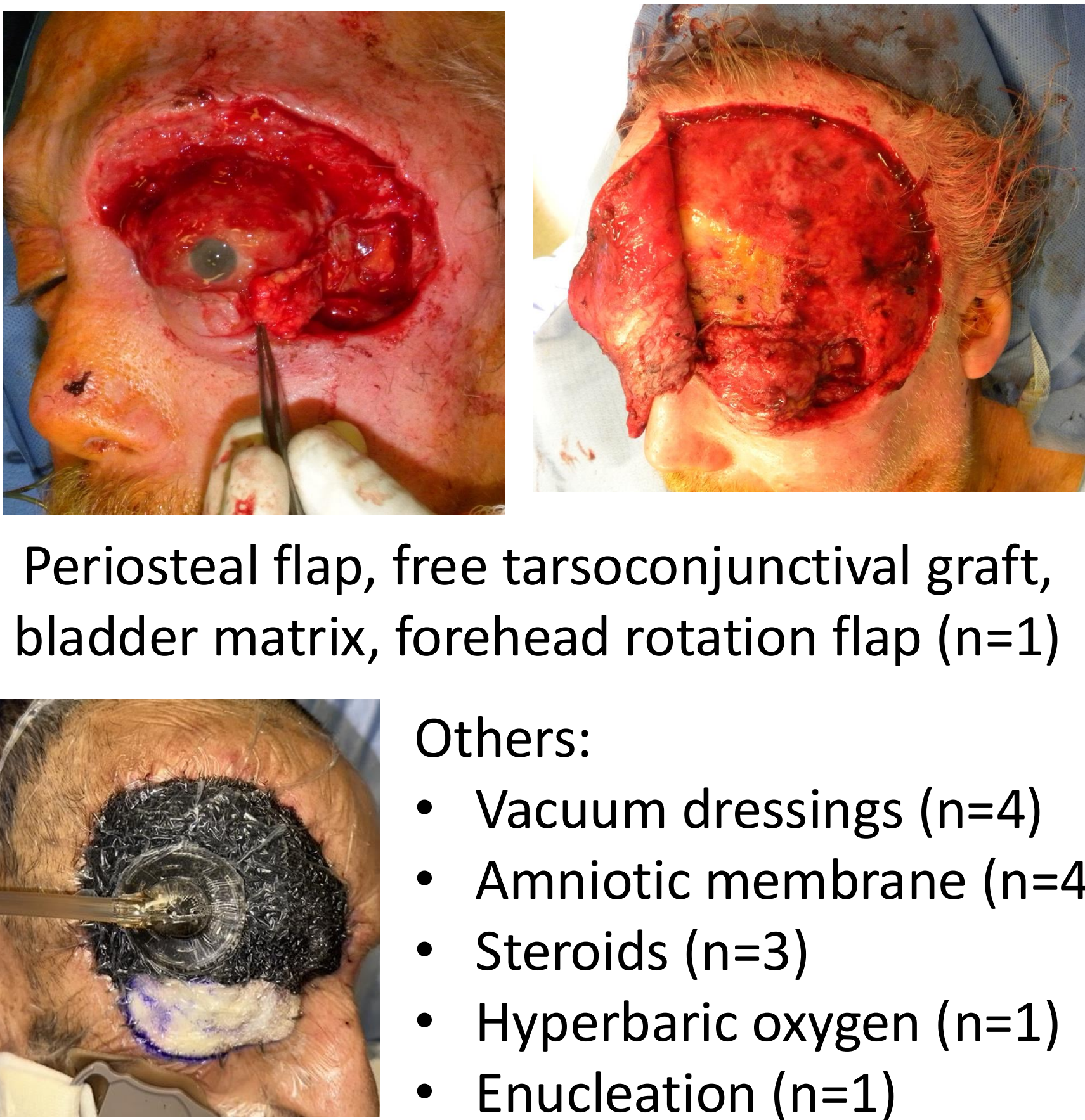
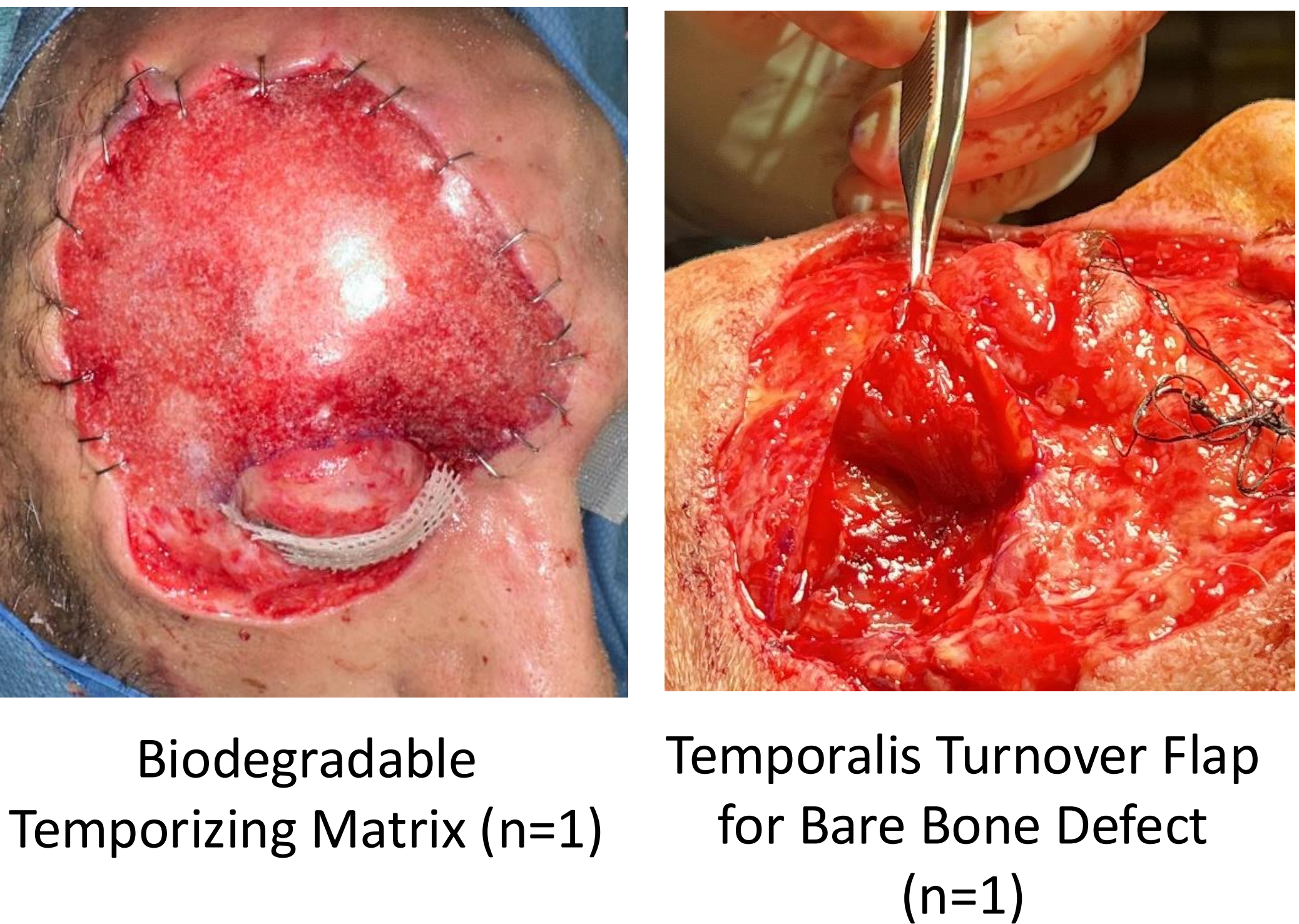
Methods

- Multicenter case series.
- Charts of patients with periocular necrotizing fasciitis between 2022-2025 were reviewed.
- Written consent for patient information to be collected was obtained.
- Approval was waived from the University of Calgary Conjoint Health Research Ethics Board.

Results

	Frequency (n=19)
Age	4-69 yrs (median 55, min 4)
Sex	16 (84%) Male
Risk Factors	7 (37%) Substance use 6 (32%) Diabetes 4 (21%) Group living 2 (11%) Immunocompromise
Cultures	100% Group A <i>Strep.</i> 5 (26%) Polymicrobial 3 (16%) COVID-19
Distribution	100% Preseptal upper lid 9 (47%) Preseptal lower lid 2 (11%) Posterior lids 2 (11%) Orbital
Regional Extension	5 (26%) Neck fascia 3 (16%) Facial 1 Metastatic (death)

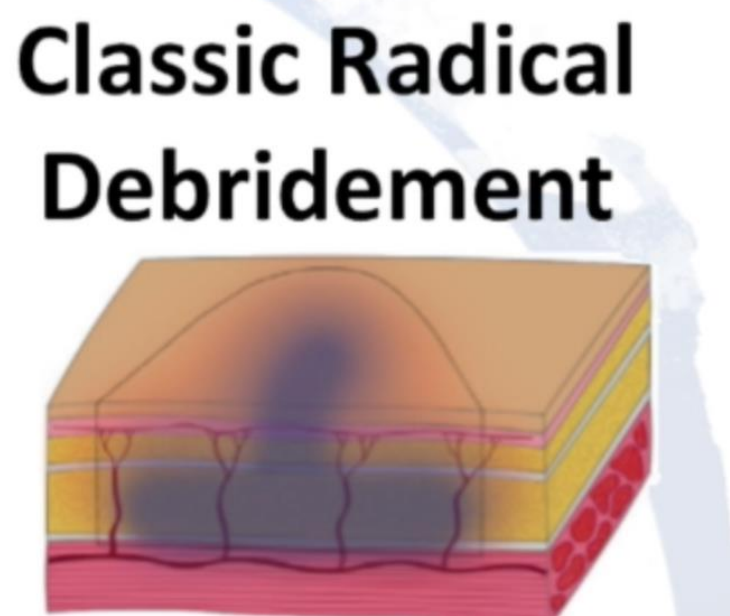
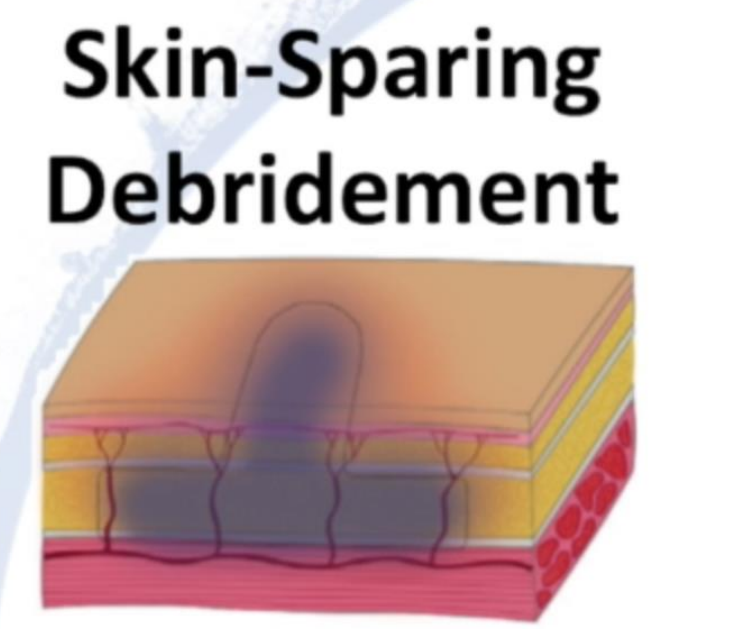
Reconstructive Techniques:



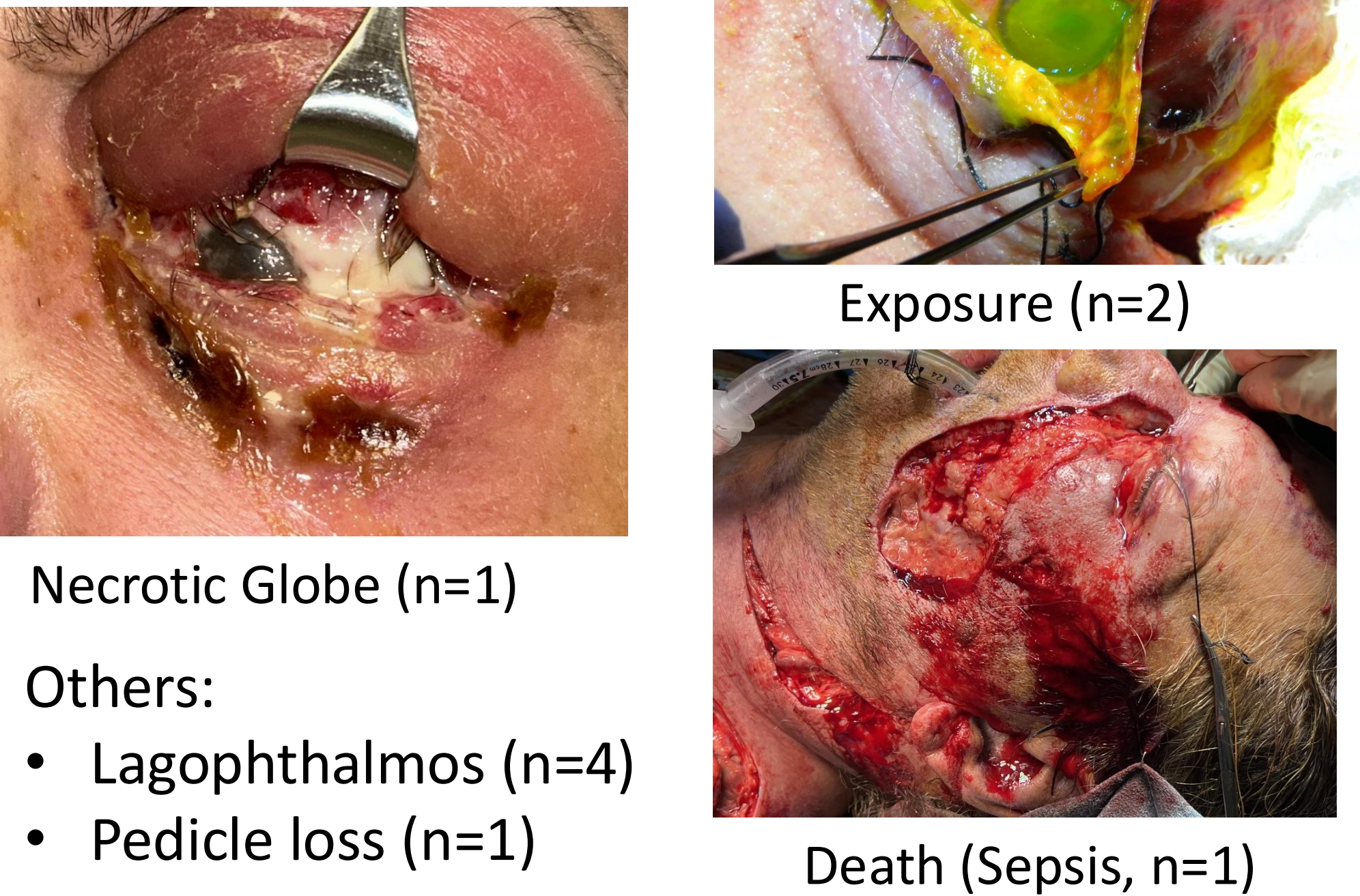
Traditional Debridement in 9 Cases (47%)



Conservative Debridement in 10 Cases (53%)



M&M



Discussion

- This series illustrates the diversity and complexity of NF presentations, and the wide array of approaches used to debride and reconstruct.
- Large defects and traditional debridement were associated with severe immunocompromise, diabetes, and delayed presentations.
- Conservative debridement, including subcutaneous dissection and blunt slough of eschar may reduce morbidity in mild cases.

References

1. Joffe AM, McDougall L. Group A Streptococcus in Alberta. Memorandum, January 25, 2024. Available online: <https://content/uploads/2024/01/iGAS-and-GAS-CMOHSMOH-Letter>
2. Bagcchi, S. (2023). Surge of invasive Group A streptococcus diseases, 23(3), 284–284. [https://doi.org/10.1016/S1473-3099\(23\)00000-0](https://doi.org/10.1016/S1473-3099(23)00000-0)

