

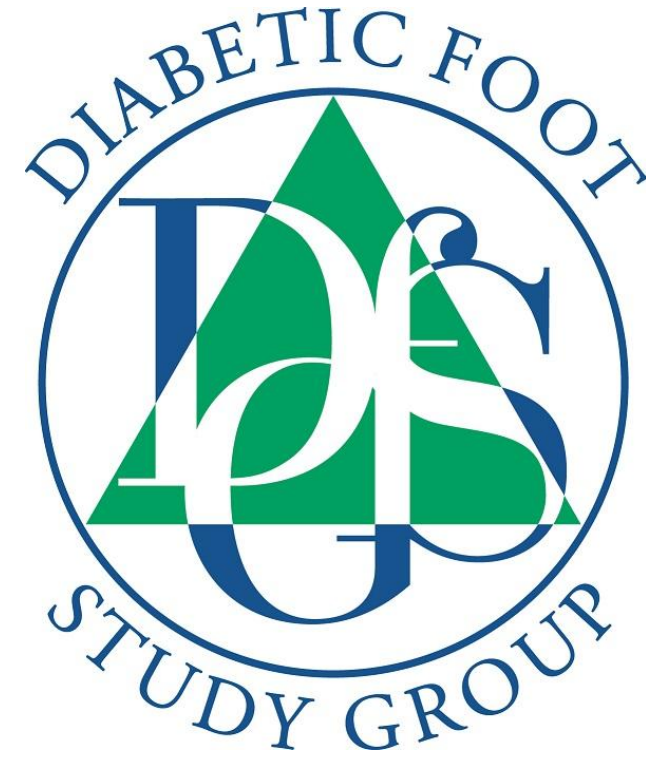
Microbiological patterns in hospitalized diabetic foot infections: clinical implications

Authors: Marta Castro Tomé¹, Guilherme Pereira², Miguel Guerreiro Pacheco³, Margarida Gomes Praça³, André Couto de Carvalho³, Cláudia Freitas³, Cláudia Amaral³, Lia Ferreira³, Susana Garrido³, Luís Loureiro³, Joana Martins³, Miguel Abreu³, Francisco Xará Leite³, Rui Carvalho³

¹Unidade Local de Saúde de Matosinhos, Matosinhos, Portugal

²Instituto de Ciências Biomédicas Abel Salazar, Universidade do Porto, Porto, Portugal

³Unidade Local de Saúde Santo António, Porto, Portugal



Introduction

Diabetic foot infections (DFI) are a major cause of hospitalization and are associated with lower-limb amputation and reduced quality of life.

Characterizing local epidemiology and resistance patterns is crucial to optimize treatment.

Aim

To characterize the clinical and microbiological profile of hospitalized patients with DFI.

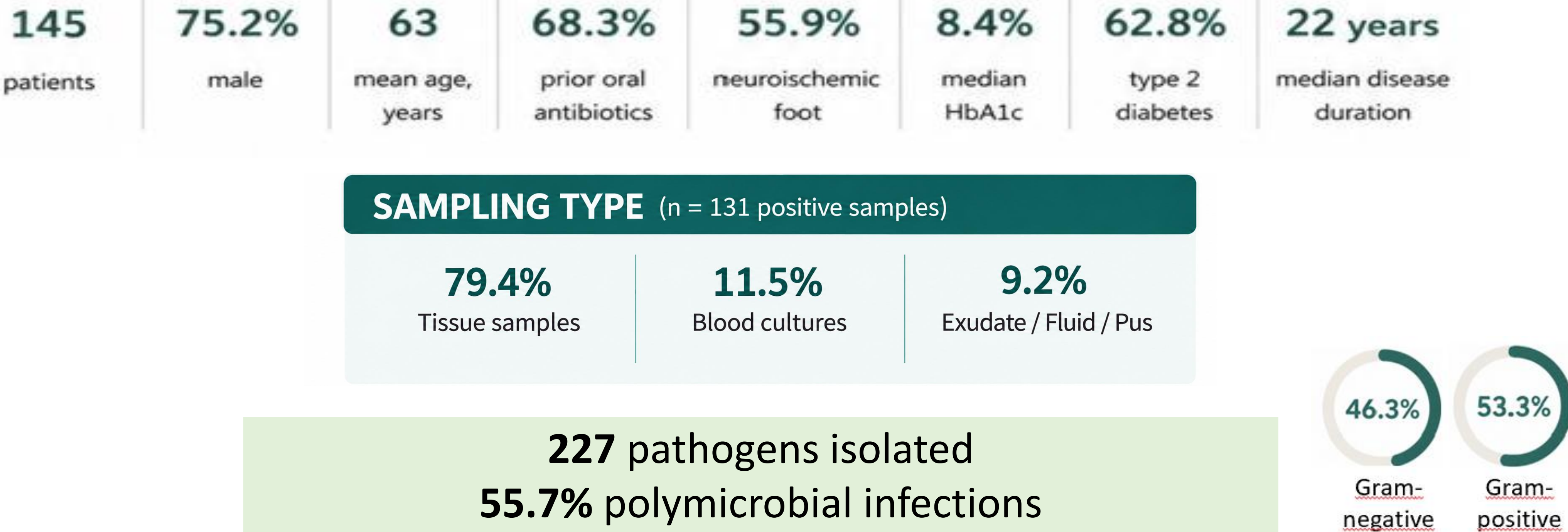
Methods

DESIGN: Retrospective observational study.

STUDY SAMPLE: Patients admitted for DFI at a tertiary hospital (2021–2023); only the first admission per patient was included. Patients without microbiological sampling were excluded.

DATA AND ANALYSIS: Demographic, clinical and microbiological data, including prior antibiotic exposure (≤ 30 days) and sampling type, were retrospectively collected. Descriptive statistics were performed.

Results



Antimicrobial Resistance

60%
Pseudomonas aeruginosa resistant to fluoroquinolones

23%
Staphylococcus aureus isolates were MRSA

6.4%
Carbapenemase-producing Enterobacteriaceae

Conclusion

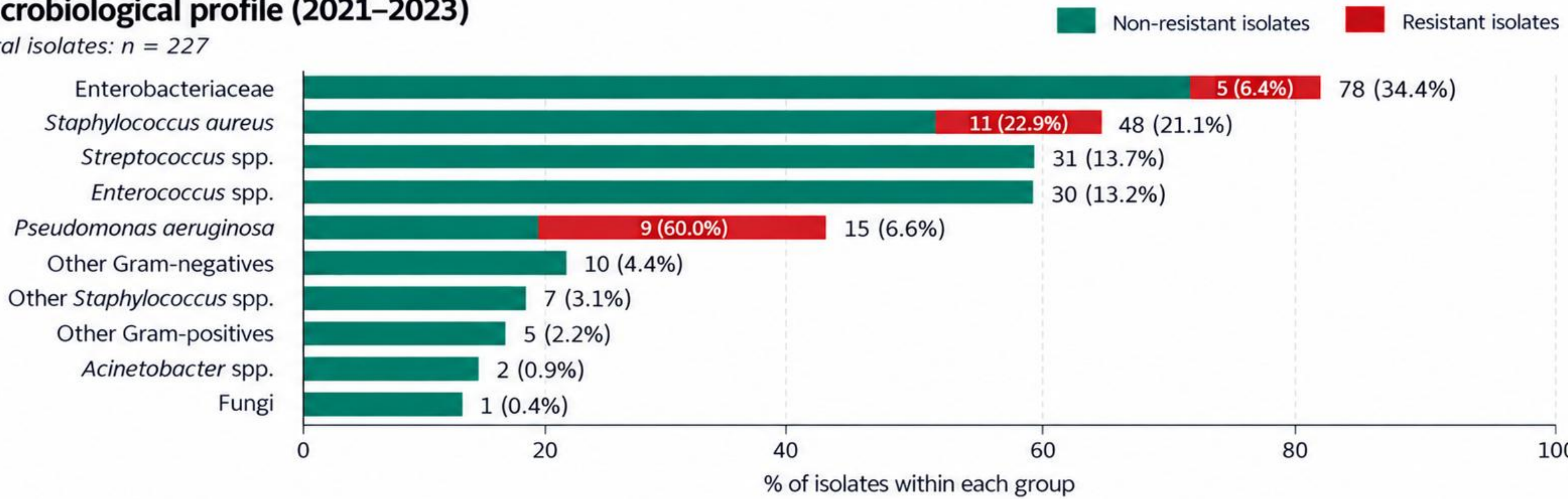
- Gram-negative bacteria represented a substantial proportion of isolates, with Enterobacteriaceae emerging as the most frequently identified group.
- Relevant antimicrobial resistance was observed, particularly among *P. aeruginosa*, with a high proportion of fluoroquinolone-resistant isolates.

Clinical Implications

Local microbiological and resistance patterns should be continuously monitored to support appropriate empirical antibiotic selection and antimicrobial stewardship.

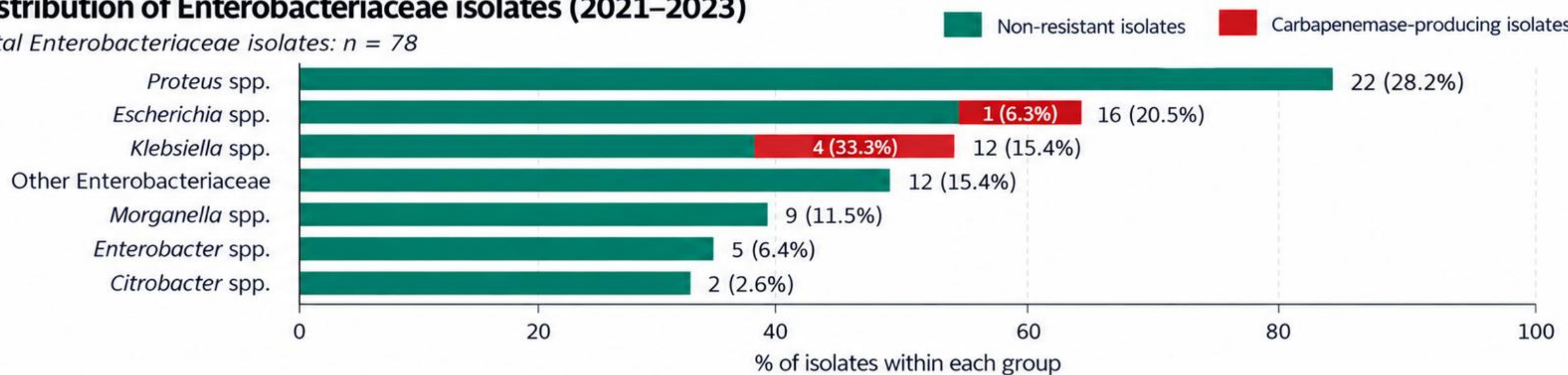
Microbiological profile (2021–2023)

Total isolates: n = 227



Distribution of Enterobacteriaceae isolates (2021–2023)

Total Enterobacteriaceae isolates: n = 78



References:

- Senneville E, Albalawi Z, van Asten SA, et al. IWGDF/IDSA guidelines on the diagnosis and treatment of diabetes-related foot infections (IWGDF/IDSA 2023). *Diabetes Metab Res Rev*. 2024;40(3):e3687. doi:10.1002/dmrr.3687.
- Evolutionary trends in bacteria isolated from moderate and severe diabetic foot infections in a Portuguese tertiary center. *Diabetes Metab Syndr*. 2020. doi:10.1016/j.dsx.2020.02.010.