

CHRONIC OSTEOMYELITIS: DOES LONGER DISEASE DURATION INFLUENCE SURGICAL COMPLEXITY?

Banza J.¹, Rebola J.¹, Alturas I.¹, Silva B.¹, Parreira M.¹, Rafael H.¹, Grenho A.¹

¹ - Department of Orthopaedics, São José Local Health Unit, Lisbon, Portugal

Introduction

- **Chronic osteomyelitis** remains a major therapeutic challenge.
- Disease duration is often assumed to reflect increasing severity.
- Unclear whether long-standing infection means more complex surgical management.

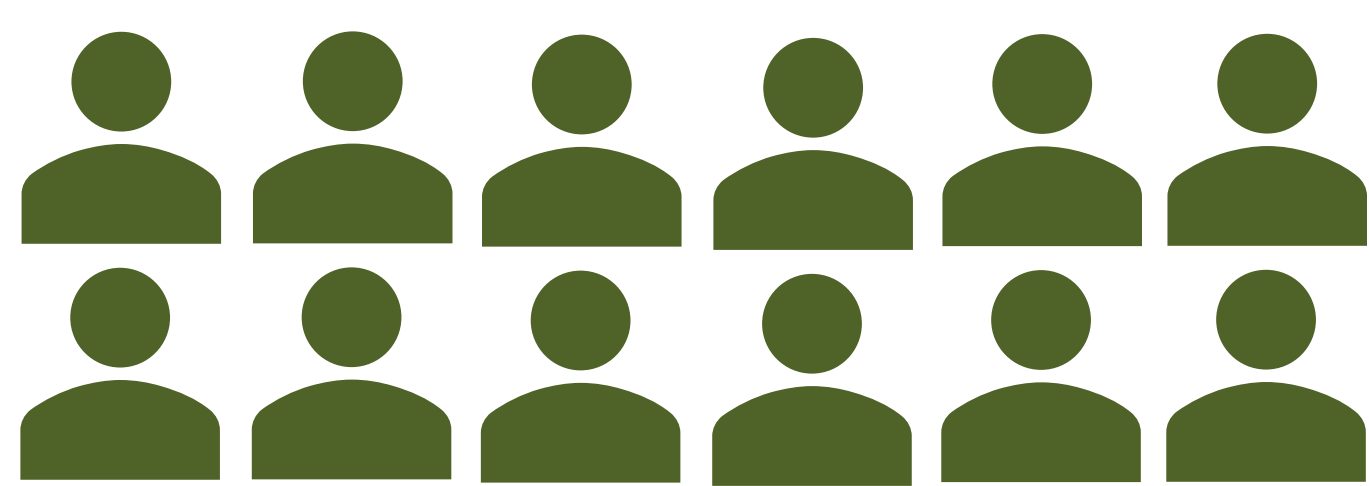
Aim: compare microbiology, surgical strategy, and outcomes between long- and short-duration chronic osteomyelitis.

Methods

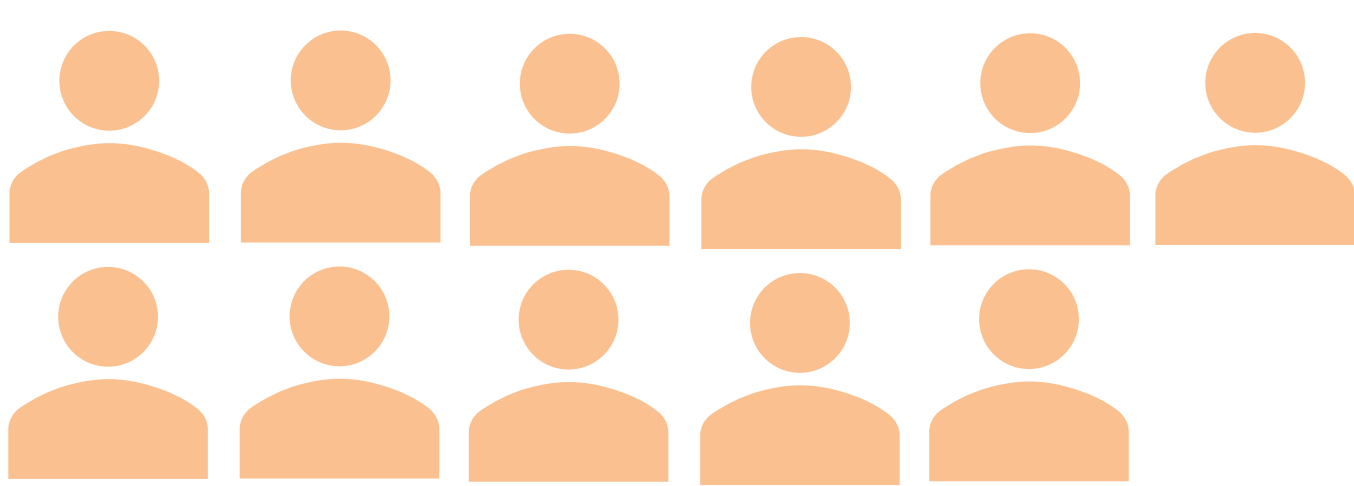
- Retrospective study — patients surgically treated for chronic osteomyelitis.
- Two groups by disease duration:
 - **Group 1: >10 years;**
 - **Group 2: <10 years.**
- Data collected:
 - Microbiology;
 - Classification — **Cierny–Mader & BACH;**
 - Surgical strategy — single-stage vs two-stage;
 - Bone resection;
 - Fixation;
 - Soft-tissue coverage;
 - Clinical outcome — resolution vs recurrence.

Results

Study population & disease duration



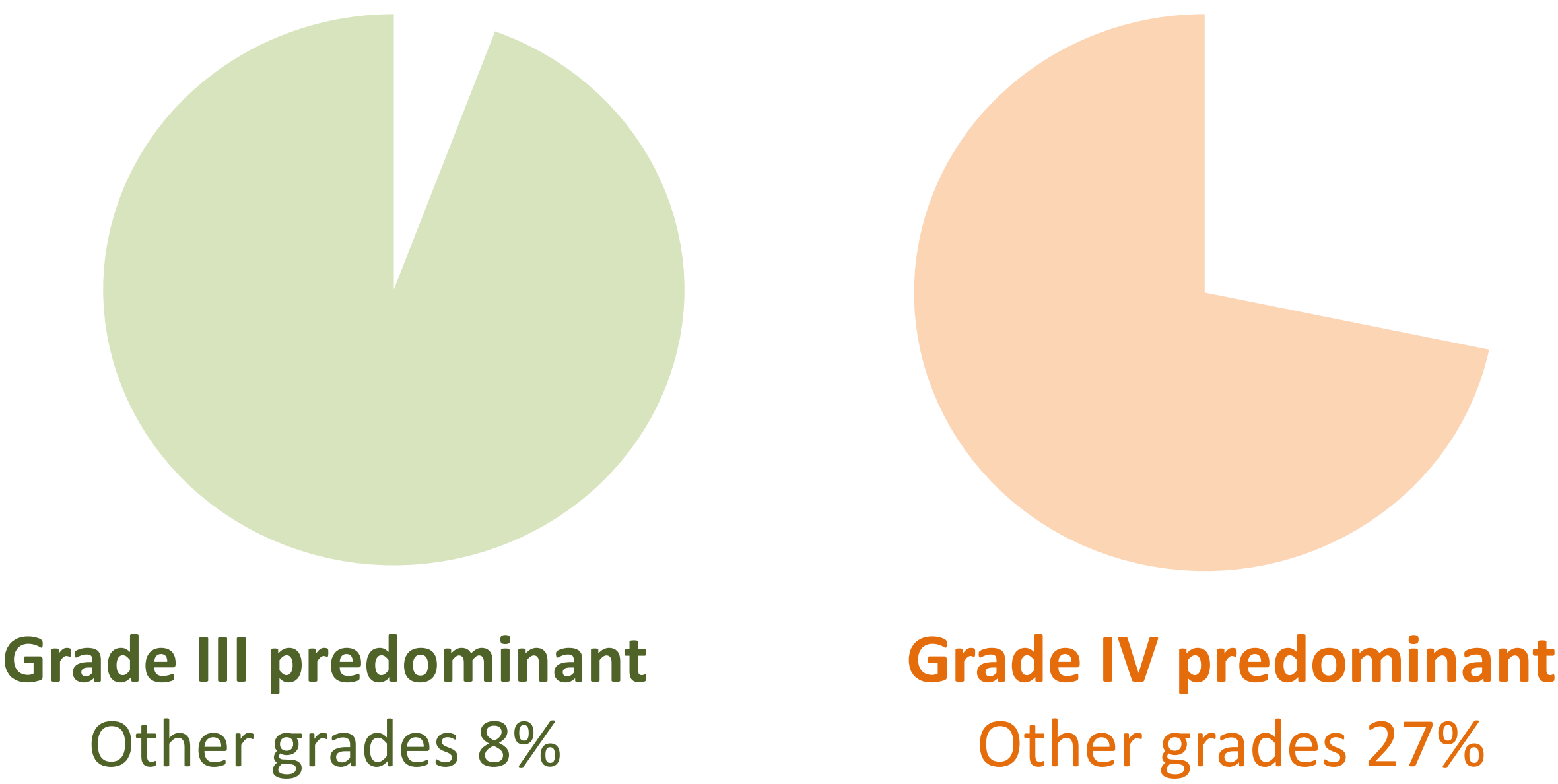
Group 1 (n=12)
Mean 29.6 years



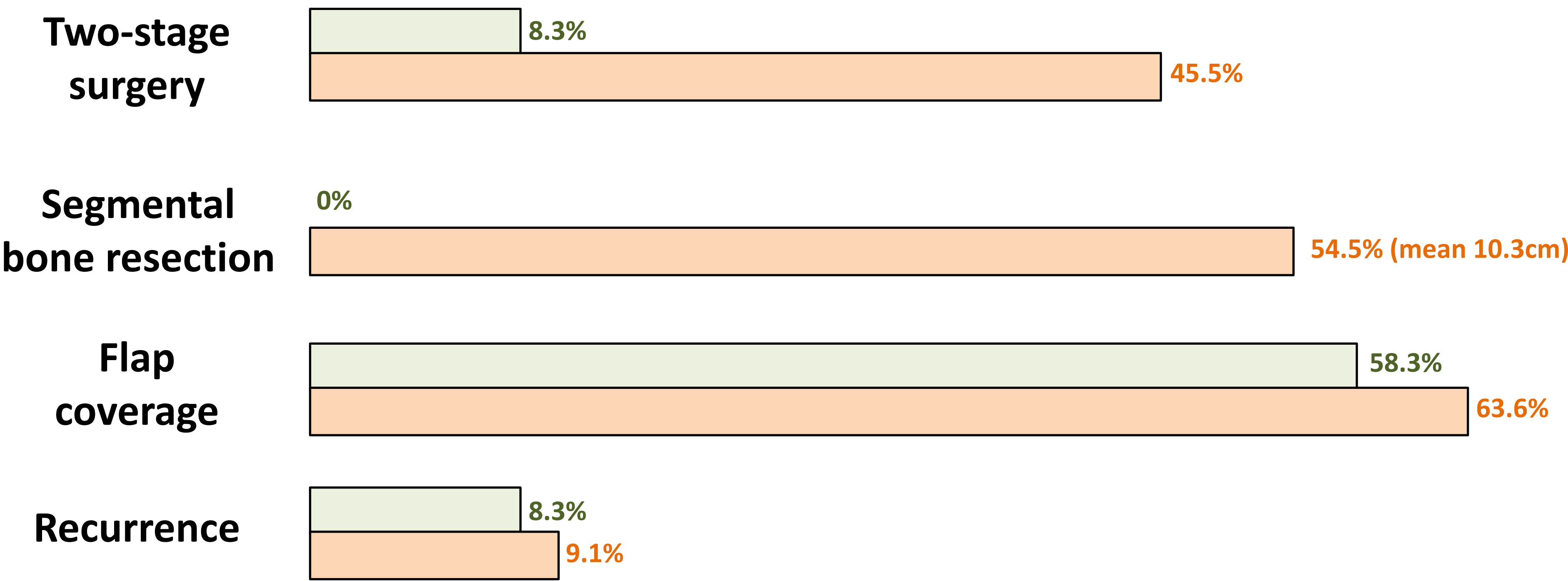
Group 2 (n=11)
Mean 3.6 years

23 patients total

Cierny-mader classification



Surgical strategy & outcomes



Microbiology, host profile (BACH) & fixation

- Group 1**
- Monomicrobial: 66.7% (mainly *S. aureus*)
 - BACH: favourable host, less aggressive pathogens
 - Adequate soft-tissue coverage
 - Fixation: rarely need
- Group 2**
- Greater diversity: Gram-negative + fungal organisms
 - BACH: higher resistant pathogens
 - Poorer soft tissue, greater host compromise
 - Fixation required: 63.6%

Conclusions

Long-standing osteomyelitis was not associated with increased surgical complexity. By contrast, **shorter-duration cases required more aggressive surgical management**, likely reflecting higher biological activity, greater microbiological diversity, and greater host compromise. **Chronic, long-standing infections may evolve into more contained and stable disease states.** These findings challenge the assumption that longer disease duration implies greater severity and highlight the importance of multidimensional assessment in guiding surgical strategy.

Literature

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