



UNIDADE LOCAL DE SAÚDE
SÃO JOSÉ

PREDICTORS OF SURGICAL BURDEN IN PAEDIATRIC OSTEOMYELITIS: A MULTIVARIABLE ANALYSIS

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INTRODUCTION & AIM

Surgical burden (requirement for ≥ 2 surgical procedures) $\longrightarrow$ indicator of severity in pediatric osteomyelitis (PO), reflecting the complexity of infection and its treatment.
This study aimed to identify independent predictors of increased surgical burden in PO.

METHODS

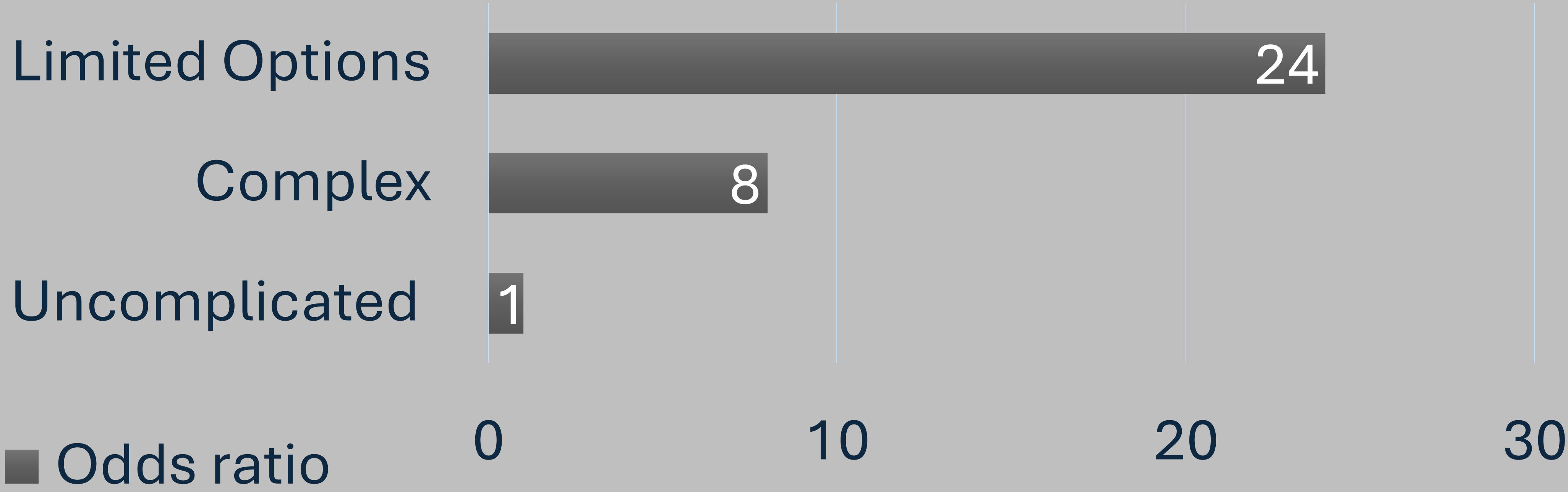
Retrospective cohort study, with 92 children with PO, analysed:

- Clinical
- Microbiological
- Variables from the BACH, Beit CURE, Cierny–Mader, and Roberts classifications.

RESULTS

48% of patients : ≥ 2 surgical procedures

Higher BACH categories were strongly associated with increased surgical burden ($p < 0.001$), with BACH remained the strongest independent predictor in multivariable analysis. Compared with uncomplicated cases, patients in the complex category had significantly increased odds of multiple surgeries (OR 8), whereas those in the limited options category had markedly higher risk (OR 24).



Microbiological factors, including resistant organisms, and host-related variables were not independently associated with surgical burden.

CONCLUSIONS

- The surgical burden in paediatric osteomyelitis is primarily driven by disease complexity
- BACH outperforms other systems in predicting the need for repeat surgery
- These findings reinforce the clinical utility of BACH in guiding decision-making