Letter to the Editor

Dear Editor,

After reading the article *"Neonatal Vertebral Osteomyelitis: Case Report and Literature Review"* by Manzone P. and Ovejero MP, recently published in the AAOT Journal, which highlights the challenges in managing this severe condition based on the authors' experience,[1] I would like to comment on the relevance of the predominant pathogens in this entity and the empirical antibiotic approach, critical aspects for optimizing outcomes in these patients.

Neonatal vertebral osteomyelitis (NVO) is most associated with *Staphylococcus aureus*, including methicillin-resistant strains (MRSA), as in the case described in the original article, followed by *Streptococcus agalactiae*. Among Gram-negative organisms, *Klebsiella pneumoniae* and *Escherichia coli* are frequently identified, particularly in nosocomial sepsis or in preterm neonates. Early identification of the causative pathogen is essential, as antimicrobial resistance significantly impacts prognosis.[2]

Considering the most frequent pathogens, initial antibiotic therapy should provide coverage for both Gram-positive and Gram-negative organisms, prioritizing agents with adequate bone penetration and guided by local antimicrobial resistance patterns, which were not specified for the Centro Nicolás Andry, where the reported case was managed. In neonates without risk factors for multidrug-resistant organisms, the regimen used appears appropriate to cover the relevant pathogens. In nosocomial settings or in cases of severe sepsis, the use of carbapenems should be considered. Transition to oral therapy should be guided by culture results and clinical response, with a total treatment duration of 4-6 weeks.[3]

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