

Antimicrobial Stewardship and Prognostic Interpretation in Emphysematous Pyelonephritis: Considerations Arising from a Recent Case Series [Letter]

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Dear editor

We read with great interest the recent article by Zhang et al reporting the microbiological characteristics, antimicrobial susceptibility patterns, and treatment outcomes of 15 patients with emphysematous pyelonephritis (EPN).¹ The authors should be commended for presenting one of the largest recent single-center EPN series from mainland China and for highlighting the increasing challenge of antimicrobial resistance in this life-threatening condition. However, several aspects of the study merit further discussion.

First, the authors proposed a treatment algorithm recommending specific antibiotics, including amikacin, cefotetan, cefoperazone-sulbactam, carbapenems, and piperacillin-tazobactam, based on their susceptibility findings. While these observations are clinically valuable, caution is warranted when extrapolating antibiotic recommendations from only 12 culture-positive isolates. Notably, susceptibility to cefotetan and cefoperazone-sulbactam was assessed in only five and eight isolates, respectively. Given the retrospective design, small sample size, and heterogeneity of cultured specimens, these findings may not adequately support generalized empirical treatment recommendations. Contemporary antimicrobial stewardship principles emphasize that local susceptibility data should complement, rather than replace, broader epidemiological evidence and guideline-based decision making.²

Second, an intriguing finding that deserves greater attention is the high prevalence of sodium-glucose cotransporter-2 (SGLT2) inhibitor use among diabetic patients. Seven of eleven diabetic patients (63.6%) were receiving SGLT2 inhibitors. Although the authors appropriately cited evidence suggesting no overall increase in urinary tract infections with these agents,³ the remarkably high proportion observed in this cohort raises important questions. Information regarding treatment duration, specific agents, glycemic control, and comparison with local diabetic populations could have provided valuable context. Given continuing discussions regarding severe genitourinary infections in patients receiving SGLT2 inhibitors, this observation may warrant dedicated investigation in larger cohorts.

Third, the authors concluded that the current Huang–Tseng classification does not adequately reflect disease severity or prognosis. We agree that clinical status frequently outweighs radiological classification in determining outcomes. Nevertheless, this conclusion should be interpreted cautiously. In the present series, only two deaths occurred, both in patients classified as Huang–Tseng class 2. Such a limited number of mortality events restricts the ability to evaluate the prognostic performance of any classification system. Previous systematic reviews and meta-analyses have consistently identified advanced Huang–Tseng classes (III–IV) as predictors of adverse outcomes and mortality.⁴ Therefore, larger multicenter studies are required before challenging the prognostic utility of this widely accepted classification.

Despite these limitations, Zhang et al provide valuable contemporary data regarding EPN management and antimicrobial resistance. Future multicenter investigations incorporating standardized microbiological assessment and larger patient populations may further refine risk stratification and optimize antimicrobial strategies for this rare but potentially fatal disease.

Data Sharing Statement

No datasets were generated or analysed during the current study.

Human Ethics and Consent to Participate

Not applicable, as no patient data were collected or analyzed in this study.

Author Contributions

M Çeker: Conceptualization, Literature Review, Methodology, Writing – Original Draft, Writing – Review & Editing.

G Çeker: Conceptualization, Literature Review, Methodology, Writing – Original Draft, Writing – Review & Editing.

All authors made substantial contributions to the conception and design of the work, participated in drafting and critically revising the manuscript, approved the final version for publication, agreed on the journal to which the article was submitted, and accept responsibility and accountability for all aspects of the work.

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