

سناریوهای درمان کودکان مبتلا به عفونت های مقاوم در بخش مراقبت های ویژه

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Infectious Diseases Society of America 2024 Guidance on the Treatment of Antimicrobial-Resistant Gram-Negative Infections

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The Infectious Diseases Society of America (IDSA) is committed to providing up-to-date guidance on the treatment of antimicrobial-resistant (AMR) infections. This guidance document focuses on infections caused by extended-spectrum β -lactamase-producing Enterobacterales (ESBL-E), AmpC β -lactamase-producing Enterobacterales (AmpC-E), carbapenem-resistant Enterobacterales (CRE), *Pseudomonas aeruginosa* with difficult-to-treat resistance (DTR *P. aeruginosa*), carbapenem-resistant *Acinetobacter baumannii* (CRAB), and *Stenotrophomonas maltophilia*. This updated document replaces previous versions of the guidance document. A panel of 6 infectious diseases specialists with expertise in managing antimicrobial-resistant infections formulated questions about the treatment of infections caused by ESBL-E, AmpC-E, CRE, DTR *P. aeruginosa*, CRAB, and *S. maltophilia*. Because of differences in the epidemiology of AMR and availability of specific anti-infectives internationally, this document focuses on the treatment of AMR infections in the United States. Preferred and alternative suggested treatment approaches are provided with accompanying rationales, assuming the causative organism has been identified and antibiotic susceptibility results are known. Approaches to empiric treatment, transitioning to oral therapy, duration of therapy, and other management considerations are discussed briefly. Suggested approaches apply for both adult and

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Overview

1. Carbapenem-resistant Enterobacterales
(CRE)
2. *Pseudomonas aeruginosa* with difficult-to-treat resistance (DTR)
3. Carbapenem-resistant *Acinetobacter baumannii* (CRAB)

Klebsiella pneumoniae CRE

- Urine culture:

Sensitive: cotrimoxazole

Resistance: amikacin, cefepime, cefotaxime, ciprofloxacin, gentamicin, imipenem, nitrofurantoin, piperacillin-tazobactam

Klebsiella pneumoniae CRE

- Urine culture:

Sensitive: cotrimoxazole, ciprofloxacin

Resistance: amikacin, cefepime, cefotaxime, gentamicin, imipenem, nitrofurantoin, piperacillin-tazobactam

Klebsiella pneumoniae CRE

- Urine culture:

Sensitive: -

Resistance: amikacin, cefepime, cefotaxime, gentamicin, imipenem, nitrofurantoin, piperacillin-tazobactam, cotrimoxazole, ciprofloxacin

Novel

- Ceftazidime-avibactam
- Meropenem-vaborbactam
- Imipenem-cilastatin-relebactam



Klebsiella pneumoniae CRE

- Blood culture:

Tigecycline?

Colistin?

Combination therapy?

Sensitive: -

Resistance: amikacin, cefepime, cefotaxime, gentamicin, imipenem, nitrofurantoin, piperacillin-tazobactam, cotrimoxazole, ciprofloxacin

Klebsiella pneumoniae CRE

- Urine culture:

Sensitive: cotrimoxazole, ciprofloxacin

Resistance: amikacin, cefepime, cefotaxime, gentamicin, imipenem, nitrofurantoin, piperacillin-tazobactam

Pseudomonas aeruginosa **MDR**

- Blood culture:

Sensitive: Cefepime, ceftazidime, ciprofloxacin, piperacillin-tazobactam

Resistance: imipenem

Pseudomonas aeruginosa **DTR**

- Urine culture:

Sensitive: -

Resistance: meropenem, Cefepime, ceftazidime, ciprofloxacin, piperacillin-tazobactam, amikacin

Pseudomonas aeruginosa **DTR**

- Blood culture:

Sensitive: -

Resistance: Meropenem, Cefepime, Ceftazidime, Ciprofloxacin, Piperacillin-tazobactam, Amikacin

Colistin?

Tigecycline?

Carbapenem-resistant *Acinetobacter baumannii* (CRAB)

- Blood culture:

Sensitive: -

Resistance: Meropenem, Cefepime, Ceftazidime, Ciprofloxacin, Piperacillin-tazobactam, Amikacin, Ampicillin-sulbactam, Cefotaxime, Cotrimoxazole, Gentamicin

Sulbactam-durlobactam + carbapenem

Ampicillin-sulbactam + colistin, tigecycline

Rifampin?

Nebulized?

Meropenem?

SUMMARY



Colistin:

1. un-complicated UTI pseudomonas DTR
2. CRAB Combination therapy

Tigecycline:

1. CRE: alternative
2. CRAB Combination therapy

Ceftazidime-avibactam:

1. CRE: choice
2. pseudomonas DTR

SUMMARY



CRE Meningitis?

- A. High dose tigecycline
- B. Colistin
- C. Colistin+ meropenem
- D. Ceftazidime-avibactam

CRAB?

- A. Meropenem+ colistin
- B. Ampicillin-sulbactam+ meropenem
- C. Colistin +tigecycline
- D. Ampicillin-sulbactam +colistin