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Background

- **Ceftolozane/tazobactam (C/T)** is a novel antibiotic commonly used in infections by gram-negative bacteria resistant to conventional antibiotics.
- **Drug dosing errors** are common in patients with **renal impairment** and can cause adverse effects or poor outcomes.

Objective

- To determine the adequacy of C/T dose adjustment according to renal function in hospitalized patients.

Methods

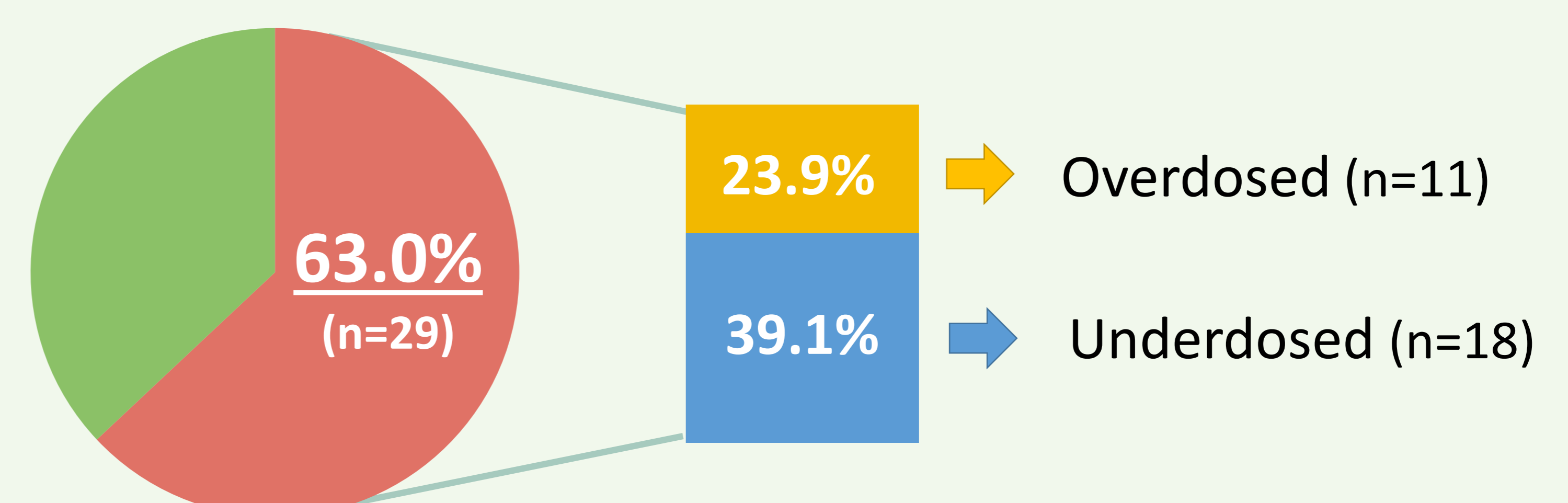
- Observational retrospective study. • Set in a tertiary-level hospital.
- Patients treated with ceftolozane/tazobactam from January to August 2018 were included.
- Collected variables:

Demographic data:	Clinical variables:	Type of therapy (targeted or empiric)
Age and gender	Type of infection	Treatment duration
Creatinine clearance (CrCl)	Microorganisms isolated	Dosage adequacy
Medical/critical care unit	Posology	Effectiveness of treatment (microbiological and/or clinical cure)

Results

Demographic and clinical data (N=46)	
Mean age (years ± SD)	65.4 ± 16.2
Men	30 (65.2%)
Creatinine clearance	
< 60 mL/min	19 (41.3%)
> 60 mL/min	27 (58.7%)
Mean CrCl (mL/min ± SD)	61.8 ± 30.6
Admitted to the Intensive Care Unit	16 (34.8%)
Main infection sites	
Respiratory	20 (43.5%)
Urinary	14 (30.4%)
Intraabdominal	7 (15.2%)
Most common isolated pathogen	
Multidrug-resistant <i>P. aeruginosa</i>	42 (90.9%)
Type of therapy	
Targeted	34 (73.9%)
Empiric	12 (26.1%)
Average treatment duration	8.4 days

Inappropriate dosage at first day of therapy



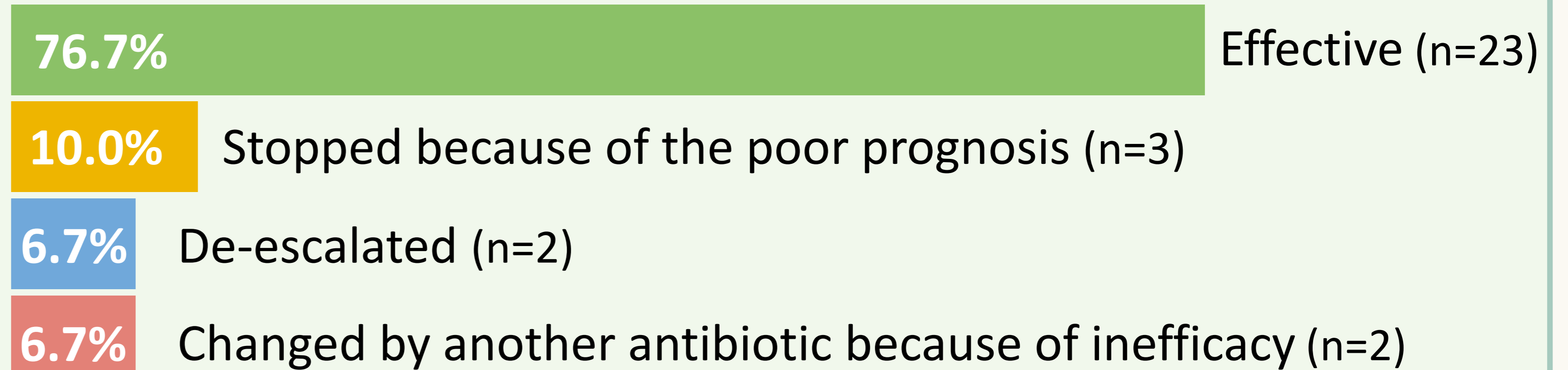
During treatment, 16 patients experienced a change in CrCl

• Dose was not adjusted accordingly in the majority of these cases

62.5% (n = 10)

Posology not adapted to the new situation

Effectiveness of targeted treatment



Conclusions

- A considerable proportion of patients treated with ceftolozane/tazobactam were inappropriately dosed.
- Furthermore, dosage was not adapted to the changes in renal function throughout the treatment.
- These data highlights the importance of an adequate review of medication.

