

# Piperacillin-tazobactam plus Ceftriaxone for *Enterococcus faecalis* Endocarditis: A Single Center Experience



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## Introduction

- *Enterococcus faecalis* is a leading cause of Infective Endocarditis (IE)
- Recommended treatment includes a combination of penicillin (PCN) or ampicillin with ceftriaxone (CRO). Outpatient ampicillin use is limited due to need for frequent dosing
- Piperacillin-tazobactam (PTZ) has similar but not identical activity against *E. faecalis* compared to ampicillin and PCN
- **Aim: Compare outcomes in those with *E. faecalis* IE discharged with CRO and either PTZ or PCN**

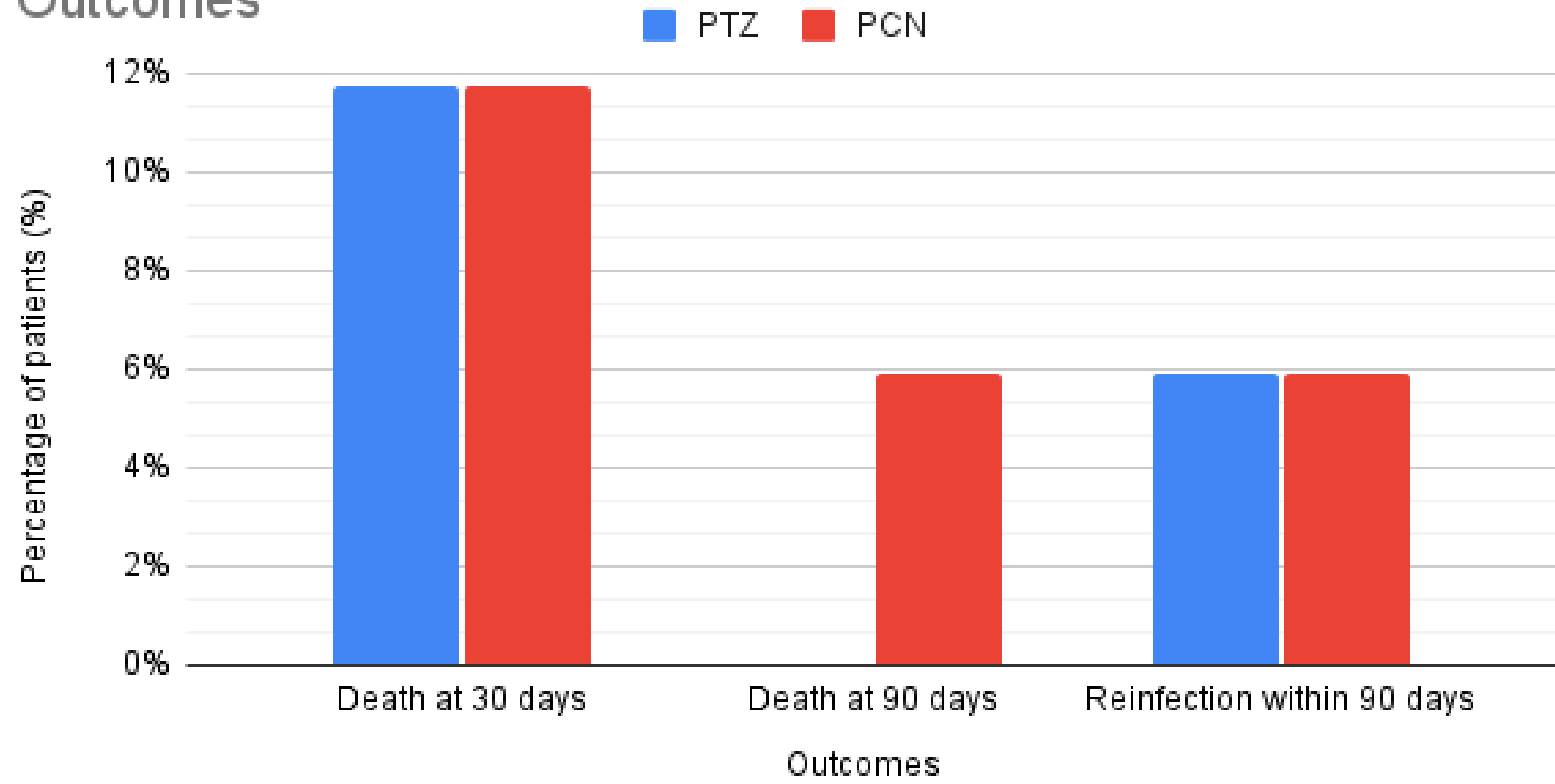
## Methodology

- Single center retrospective study conducted from August 2016 to June 2020
- Inclusion criteria: Age > 18 years, ampicillin susceptible culture proven *E. faecalis*, IE diagnosed by Duke's criteria and a discharge regimen included either PCN or PTZ with CRO
- Exclusion criteria: Discharged on other antibiotic regimens
- Primary outcomes: Failure of medical therapy at 90 days defined as death due to any cause or relapse due to infection
- Secondary outcomes: Change in antibiotic therapy, total antibiotic duration and noninfectious complications needing re-hospitalization

## Results

- 34 total patients reviewed
  - PTZ = 17
  - PCN = 17
- Both groups were predominantly male
- 19 patients underwent surgical intervention
  - PTZ = 65%
  - PCN = 47%

## Outcomes



Antibiotic complications	Hyperkalemia	Antibiotics changed due to unavailability	Thrombocytosis	Peripheral eosinophilia	Antibiotics changed post discharge
PTZ (%)	0	0	0	5.9	11.8
PCN (%)	17.6	5.9	5.9	0	29.4

Secondary outcomes

- Nearly 80% completed their defined course of antibiotic therapy
- 11 patients were readmitted for noninfectious complications
  - PTZ = 29.4%
  - PCN = 35.3%

Duration of intravenous antibiotics (weeks)	PTZ	PCN
Average duration	8.2	7.3
Average duration post source control	6.2	5.7
Average duration post discharge	4.5	4.4

Secondary outcomes (cont.)

## Conclusion

- Similar outcomes seen using either PTZ or PCN in combination with CRO
- PTZ in combination with ceftriaxone could be an alternative regimen for OPAT
- Factors to be taken into consideration:
  - Surgical control
  - Adequate lead time of PCN/ampicillin with CRO
- Limitations
  - Small sample size in a single center
  - Varying lead-in inpatient antibiotic duration prior to discharge