

Ceftaroline Fosamil for Treatment of Community-acquired Pneumonia in the Intensive Care Unit: CAPTURE Study Experience

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Introduction

- Ceftaroline fosamil (Zinforo™ / Teflaro®) is approved for the treatment of community-acquired pneumonia (CAP) and complicated skin and soft tissue infections by the European Medicines Agency, and for similar indications in the US
- Ceftaroline, the active metabolite of ceftaroline fosamil, has *in vitro* activity against *Staphylococcus aureus* and *Streptococcus pneumoniae*, including methicillin-resistant *S. aureus* (MRSA) and penicillin-resistant *S. pneumoniae* (PRSP)
- CAPTURE** (Clinical Assessment Program and Teflaro® Utilization Registry) is a multicentre registry study collecting information on the contemporary clinical usage of ceftaroline fosamil
- Data are presented to describe the use of ceftaroline fosamil for the treatment of CAP in the intensive care unit (ICU)

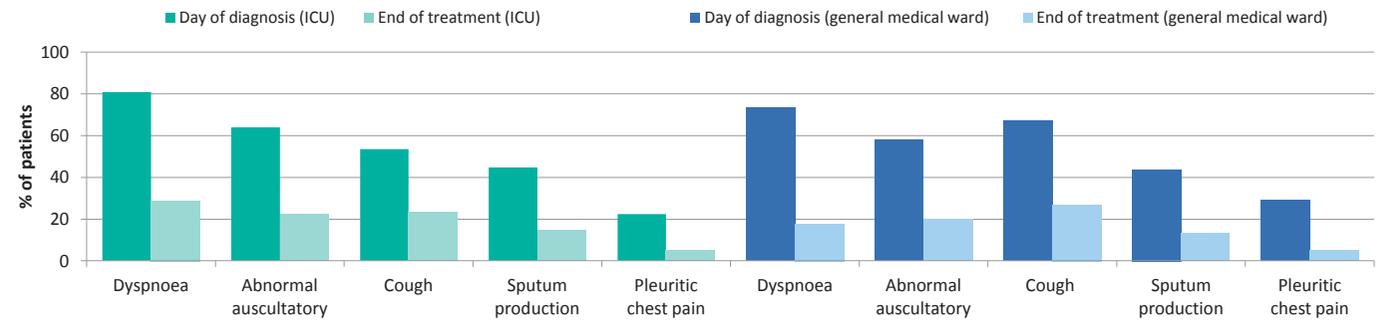
Methods

- CAPTURE data were collected between August 2011 and April 2013, from randomly ordered patient charts at 39 US sites
- The evaluable population comprised patients with data sufficient to determine a clinical response
- Clinical success was defined as clinical cure with no further need for antibiotic, or clinical improvement with switch to oral antibiotic
- For full methods, see Ramani A, et al. 2014. *J Chemother.* (in press)

Results

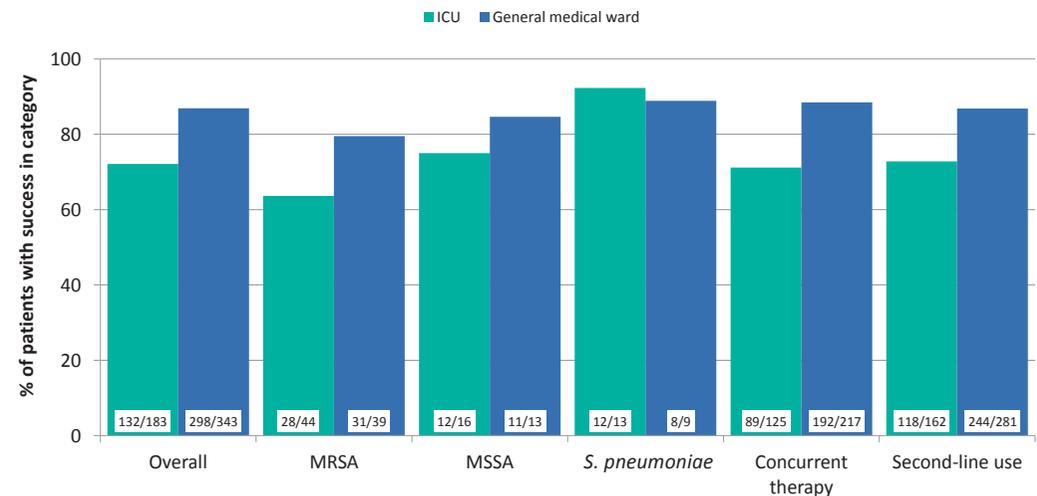
- 183 (35%) of evaluable CAP patients were admitted to the ICU and 343 (65%) were treated in general medical wards
- The mean (\pm SD) duration of stay (days) was 14.0 (\pm 18.7) in the ICU and 11.4 (\pm 12.4) in the general medical wards
- Most co-morbidities occurred more frequently in the ICU than in the general medical wards; structural lung disease was the most common (44% and 43%, respectively)
- The pathogens most frequently isolated in the ICU and general medical wards were *S. aureus* (33% and 15%, respectively, of which 24% and 11% were MRSA), and *S. pneumoniae* (7% and 3%, respectively)
- Ceftaroline fosamil was used as second-line therapy in 89% of ICU patients and in 82% of general medical ward patients; the most common prior antibiotics were glycopeptides in the ICU (42%) and other cephalosporins in general medical wards (36%)
- Concurrent antibiotics were administered in 68% of ICU patients and 63% of patients in general medical wards; most commonly, quinolones in the ICU (26%) and macrolides in general medical wards (25%)
- All signs and symptoms were less frequent at the end of treatment, compared with the day of diagnosis (**Figure 1**)
- The rates of clinical success were higher in the general medical wards than in the ICU (**Figure 2**)
- 2% of ICU patients and 1% of general medical ward patients died

Figure 1. Frequency of clinical signs and symptoms in the ICU (n = 183) and in general medical wards (n = 343)



These categories are not mutually exclusive and patients may have had more than one sign or symptom. Clinical signs and symptoms are only shown where there are > 10% of patients in either location of care on the day of diagnosis. The other sign and symptom not shown was cyanosis.

Figure 2. Clinical success rates by location of care



Conclusions

- Overall, the rates of clinical success with ceftaroline fosamil were 72% in the ICU and 87% in the general medical wards
- These data suggest that ceftaroline fosamil, despite being used second-line, is an effective treatment option for severe CAP in the ICU