**EPIDEMIOLOGY AND ANTIMICROBIAL SUSCEPTIBILITY OF BACTERIA ISOLATED FROM ADULTS WITH COMPLICATED SKIN AND SOFT TISSUE INFECTIONS IN BELGIUM: RESULTS FROM THE PREMIUM CEFTAROLINE STUDY**

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**INTRODUCTION AND PURPOSE**
- Antibiotic resistance is an increasing concern in the treatment of complicated skin and soft tissue infections (cSSTI).
- To overcome resistant infections, there is a clinical need for new effective antibacterials.
- Ceftriaxone fosamil is a new broad-spectrum cephalosporin. Ceftriaxone, the active metabolite of ceftriaxone fosamil, has in-vitro activity against Gram-positive bacteria, including methicillin-resistant Staphylococcus aureus (MRSA), as well as common Gram-negative bacteria.
- The PREMIUM study was designed to gather robust data on the epidemiology and susceptibility of bacteria causing cSSTI and community-acquired pneumonia to standard-of-care antibiotics and ceftriaxone in European adults.
- Here, results are presented for Belgian cSSTI patients.

**RESULTS**

**Susceptibility testing**
- The susceptibility of the 163 tested isolates to standard-of-care antibiotics and ceftriaxone can be found in Table 2.
- The majority of cSSTI pathogens were susceptible to the tested standard-of-care antibiotics and ceftriaxone.
- Ceftriaxone MIC₅₀ and MIC₉₀ values were 25 mg/l for methicillin-susceptible Staphylococcus aureus (MSSA), 0.5 and 1 mg/l for MRSA, 0.12 and >16 mg/l for Escherichia coli, and ≥0.08 mg/l for Streptococcus pyogenes.

**Study design and patient population**
- Multi-centre European survey study.
- Here, we describe data from samples collected from patients ≥18 years of age with cSSTI admitted to 9 Belgian hospitals between February and May 2012.
- Patients with uncomplicated SSTIs (e.g., impetigo, erysipelas, small abscess, boils) were not included.

**Sample handling and testing**
- The isolates were identified at each site and then sent to the Belgian central laboratory for re-identification and susceptibility testing.
- Determination of the minimal inhibitory concentration (MIC) was done by broth microdilution, according to the Clinical and Laboratory Standards Institute’s (CLSI) standards.

**METHODS**
- Results were interpreted according to the European Committee on Antimicrobial Susceptibility Testing (EUCAST) breakpoints (2012; 2013 for ceftaroline).
- Susceptibility testing was performed for species represented by at least 2.5% of isolates in the collection.
- Data for each isolate were collected on an electronic case report form and analysed in Microsoft Access.

**Outcome variables**
- Primary variable: the percentage of microorganisms susceptible to standard-of-care antibiotics.
- Secondary variables: MIC₅₀ and MIC₉₀ values of ceftaroline against the isolated microorganisms, and the distribution of pathogens causing cSSTI.

**CONCLUSIONS**
- The epidemiology of cSSTI in Belgian adults was dominated by Staphylococcus aureus, in accordance with the broader epidemiological picture of cSSTI.
- Susceptibility to ceftriaxone varied among cSSTI-causing isolates; all MRSA, MSSA and Streptococcus pyogenes isolates were susceptible to ceftriaxone.
- EUCAST suggests reporting enterococci and Pseudomonas aeruginosa as resistant without testing, since these organisms are poor targets for ceftriaxone.

**REFERENCES**
5. Livermore DM et al. ECCMID 2013, Berlin, Germany, P0242.

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