

**O0991 Linezolid- and vancomycin-resistant *Enterococcus* spp: epidemiological, microbiological and clinical aspects in a tertiary hospital in Germany**

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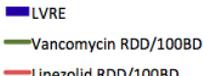
**Background:** Although still considered an uncommon finding, an increasing number of case reports have described outbreaks of linezolid- and vancomycin-resistant *Enterococcus* spp. (LVRE) over the last decade. Here, we describe the epidemiological, clinical and microbiological characteristics of a LVRE case-series encountered at the university medical center Hamburg-Eppendorf, Germany.

**Materials/methods:** We conducted a retrospective analysis of 124 LVRE isolates collected from 1 January 2012 to 30 June 2017 and reviewed the patients' medical charts. Antibiotic consumption was measured in recommended daily dose (RDD)/100 bed-days (BD). Antibiotic susceptibility was tested and interpreted according to EUCAST.

**Results:** The incidence of LVRE isolates increased from 0.026 in 2012 to 0.086 in 2016 per thousand BD. We observed an increase of 392% in the use of linezolid (from 0.37 RDD/100 BD in the 1<sup>st</sup> half of 2012 to 1.82 RDD/100 BD in the 1<sup>st</sup> half of 2017) and +201% for vancomycin (from 1.10 RDD/100 BD in the 1<sup>st</sup> half of 2012 to 3.31 RDD/100 BD in the 1<sup>st</sup> half of 2017) (Figure 1). Most patients with LVRE isolates had an onco-hematological disease (88/124; 71%) and had been hospitalized in an onco-hematology ward in the previous 6 months (74/124; 59.7%). Among patients with available data, vancomycin and linezolid were prescribed in the 6 months prior to LVRE isolation in 53/99 (53.5%) and 51/99 (51.5%), respectively. Genotypic analysis revealed presence G2576T 23S rDNA mutations in all isolates. *cfp* or *optrA* were not detected. Thirty-one (31/124; 25%) patients had LVRE-related infection, with an overall 30-day mortality rate of 29% (9/31): catheter-related bloodstream infection (15/31; 48%); abdominal (9/31; 29%); and urinary tract (6/31; 19.3%).

**Conclusions:** Incidence of LVRE related to 23S rDNA mutations is rising and associated with antibiotic consumption. This increase highlights the need for antibiotic use restriction considering the limited therapeutic options now available.

**Figure 1.** Number of LVRE isolated at the university hospital in Hamburg, Germany, from 1 January 2012 to 30 June 2017 compared with the consumption of linezolid and vancomycin.

  
[CHART]

RDD/100 BD: recommended daily dose per 100 bed-days

LVRE: linezolid- and vancomycin-resistant *Enterococcus* spp.

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