Enterococcus durans VanB

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Sir,

There have been reports of Enterococcus durans isolated from humans that have been found to have a vanA gene.1–3 We report an isolate found to have vanB.

A 28-year-old man with a past history of bipolar disorder and ethanol misuse was admitted with burns to 65% of his body. He was resuscitated in the Emergency Department and transferred to the Intensive Care Unit. There he received tetanus toxoid, intravenous fluids, silver sulphadiazine cream and narcotic analgesia. After 3 days he was discharged to the ward and 3 weeks after admission he underwent excision of burns to his upper arms, upper right arm and abdomen, which were covered with split skin grafts.

From the second day of his admission he had intermittent fevers which persisted until 3 days before discharge. Soon after admission he developed bilateral lung consolidation, though no pathogenic organisms were cultured from his sputum. Two weeks after admission he had three sets of blood cultures that were positive for methicillin-resistant Staphylococcus aureus (MRSA) and subsequently the tip of a central venous catheter also cultured MRSA. From the second day of admission he received iv ceftriaxone and flucloxacillin, both of which were ceased on the seventh day. From the fifteenth day he was given daily iv vancomycin for a total of 23 days.

On the thirtieth day of admission a rectal swab was taken as part of surveillance for vancomycin-resistant Enterococcus (VRE). The laboratory cultured an Enterococcus species which, by polymerase chain reaction (PCR), was positive for vanB. However, with specific primers for species identification,4 it was found to be neither Enterococcus faecalis nor Enterococcus faecium. The MIC by Etest (AB Biodisk, Dalvägen, Sweden) was 16 mg/L for vancomycin and 0.06 mg/L for teicoplanin. The organism was susceptible to amoxycillin and did not show high-level resistance to gentamicin. It was PYR (L-pyrrolidonyl β-naphthylamide) positive and non-motile. It was identified by the Vitek Gram-positive identification card (bioMérieux Vitek, Inc., MO, USA) as Enterococcus durans.

As there have been reports of other Enterococcus species being incorrectly identified as E. durans,5,6 the isolate was sent to the State reference laboratory (Microbiological Diagnostic Unit, University of Melbourne, Parkville, Australia), where identification as E. durans was confirmed by conventional biochemical tests, the API 20 Strep identification system (bioMérieux SA, Lyon, France) and 16S rDNA sequencing.

E. durans is not regarded as particularly pathogenic to humans and therefore VRE isolates of this species are not regarded as having the same significance for infection control as E. faecalis and E. faecium. However, its significance may lie in the ability to transfer the genetic code for vanB to other more pathogenic species. We have not demonstrated this for our isolate but plasmid-borne transfer of the vanA resistance gene has been demonstrated between E. durans and E. faecium.2 The authors comment that this has important implications in causing and disseminating invasive disease in humans.

References


