continued increases in macrolide and penicillin resistance in S. pneumoniae.

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References


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Failure of linezolid therapy for post-neurosurgical meningitis due to Enterococcus faecium

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Sir,

We report failure of linezolid treatment for post-neurosurgical enterococcal meningitis. Our patient was a 72-year-old female who presented to our Neurosurgical Intensive Care Unit with a left-sided thalamic haemorrhage and hydrocephalus for which she required bilateral external ventricular drains (EVDs) on the day of admission. These were Bactiseal™ EVDs that are impregnated with rifampicin and clindamycin to reduce the risk of bacterial colonization. The left-sided EVD was revised 4 days later and both devices were removed 13 days after admission. The day following removal of the EVDs she developed an acute febrile illness and a lumbar puncture was performed. CSF analysis revealed a white cell count of 366/μL (84% polymorphonuclear cells), and cultures grew Enterococcus faecium resistant to ampicillin and susceptible to vancomycin (MIC 0.75 mg/L) and linezolid (MIC 2 mg/L) and with no evidence of high-level gentamicin resistance (MIC 64 mg/L).1 MICs were determined by Etest. In vitro synergy testing of vancomycin and gentamicin was not undertaken based on the literature that an absence of high-level gentamicin resistance would predict synergy.1 A repeat lumbar puncture the following day grew an indistinguishable organism. Due to concerns regarding the penetration of intravenous vancomycin into the CSF and a wish to avoid further surgery to gain intrathecal (it) access, treatment was commenced with intravenous linezolid at a dose of 600 mg every 12 h. After 6 and 9 days of linezolid treatment, repeat CSF cultures grew E. faecium. The patient therefore had a new EVD inserted and was treated with 10 days of intravenous (iv) and intrathecal vancomycin (1 g every 12 h iv and 5 mg once-daily it) and gentamicin (60 mg every 8 h iv and 4 mg once-daily it) with regular monitoring of blood and CSF antibiotic levels. This management led to clinical and microbiological cure and the EVD was removed. Both the pre-treatment isolate and the isolate grown on day 9 of linezolid therapy were confirmed as E. faecium group D by species-specific PCR at the Health Protection Agency Reference Laboratory, Colindale, London, UK. They had indistinguishable antibiograms and both had a linezolid MIC of 2 mg/L (breakpoint 4 mg/L).

Nosocomially acquired intracranial infections may be caused by a wide array of microorganisms, including staphylococci, enterococci, Gram-negative bacilli and yeasts. In the presence of prosthetic devices, the treatment of choice for infections caused by Gram-positive organisms is removal of the device and iv administration of vancomycin. However, experimental and clinical data suggest that the penetration of vancomycin into CSF is poor and sometimes unpredictable in cases without severe meningeal inflammation. Some authors have reported that in patients with meningitis, continuous intravenous administration of vancomycin may lead to higher penetration, though in patients without meningitis CSF concentrations usually remain below 4 mg/L.2 The breakpoint concentration...
A paediatric case of acute liver failure associated with efavirenz-based highly active antiretroviral therapy and effective use of raltegravir in combination antiretroviral treatment after liver transplantation

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Sir,

The role of antiretrovirals is often implied in liver toxicity, but they rarely cause acute liver failure (ALF). Nucleoside reverse transcriptase inhibitors (NRTIs) are associated with mitochondrial toxicity, which can lead to lactic acidosis with ALF. Protease inhibitors (PIs) and non-NRTIs (NNRTIs) can cause liver toxicity, especially in patients co-infected with viral hepatitis. Nevirapine is the NNRTI most commonly associated with ALF.1 There is only one reported case of ALF associated with efavirenz-based antiretroviral therapy (ART).2 In patients with HIV who develop liver failure and require liver transplantation, the choice of ART after liver transplantation is limited because of interactions between ART and immunosuppressants and adverse effects on renal and liver functions.

We report for the first time a paediatric HIV case requiring liver transplantation for ALF 13 weeks after starting efavirenz-based ART and being treated with raltegravir post-transplantation. Consent for publication of this case was given by the parents of the child.

The patient was born in the UK by normal delivery and was breast-fed. Antenatal screening for HIV infection was declined. HIV infection was diagnosed at 8 months of age when he presented with generalized lymphadenopathy, massive abdominal...

References


