

Daptomycin

Daptomycin is a safe and effective option for the treatment of MRSA infection involving the spine ¹⁾.

A 23-year-old man with a history of multiple ventriculoperitoneal shunt revisions resulting from multidrug-resistant *Staphylococcus epidermidis* shunt infection presented with meningitis despite suppressive antibiotic therapy. After source control surgery, the patient improved with intravenous daptomycin plus IT vancomycin. Then, 4 days later, significant ventriculostomy output occurred, and the *S epidermidis* was confirmed to be intermediately sensitive to vancomycin (MIC = 8 µg/mL) and susceptible to daptomycin (MIC = 2 µg/mL). IT vancomycin was changed to IT daptomycin 5 mg in 3 mL normal saline (NS) every 24 hours for 3 days, then every 72 hours for 18 days. The cerebrospinal fluid (CSF) was sterile after 1 day of IT daptomycin and remained so. Creatine kinase remained normal throughout the course of treatment. The patient was discharged on hospital day 50 without antibiotics.

IT daptomycin has been reported for adult doses ranging from 5 to 10 mg once every 24 to 72 hours in volumes ranging from 5 to 10 mL; drug accumulation has been seen after the third dose of once every 24 hours dosing, and delayed improvement has been seen with once every 72 hours dosing. We planned for rapid load and CSF sterilization and extended the dosing interval once drug accumulation was expected to have occurred. CONCLUSIONS:

IT daptomycin 5 mg diluted to 3 mL in NS and dosed in a loading strategy was effective and without adverse sequelae ²⁾.

¹⁾

Burdette SD. Daptomycin for methicillin-resistant *Staphylococcus aureus* infections of the spine. *Spine J.* 2009 Jun;9(6):e5-8. doi: 10.1016/j.spinee.2008.11.008. Epub 2008 Dec 27. PubMed PMID: 19112049.

²⁾

Denetclaw TH, Suehiro I, Wang PK, Tolliver GL. Successful Treatment of Ventriculostomy-Associated Meningitis Caused by Multidrug Resistant Coagulase-Negative *Staphylococcus epidermidis* Using Low-Volume Intrathecal Daptomycin and Loading Strategy. *Ann Pharmacother.* 2014 Oct;48(10):1376-9. doi: 10.1177/1060028014542634. Epub 2014 Jul 3. PubMed PMID: 24994724.

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