Case Report

A fatal case of native valve endocarditis with multiple embolic phenomena and invasive methicillin-resistant *Staphylococcus aureus* bacteremia: a case report from the Maldives.

Ali Shafeeq1, Hisham Ahmed Imad2,3,4\*, Ahmed Azhad1, Migdhaadh Shareef1, Mohamed Shaneez Najmy1, Mohamed Mausool Siraj1, Mohamed Sunil1, Rimsha Rafeeu5, Aishath Sofa Moosa5, Ahmed Shaheed6, Thundon Ngamprasertchai3,7, Wasin Matsee3,7, Pyae Linn Aung2 , Wang Nguitragool2,8 and Tatsuo Shioda4

1 National Cardiac Center, Indira Gandhi Memorial Hospital, Malé, Maldives; dr.shafeeq@igmh.gov.mv (A.S.); dr.azhad@igmh.gov.mv (A.A.); dr.miqdhaadh@igmh.gov.mv (M.S.); [dr.mohmedshaneeznajmy@igmh.gov.mv](mailto:dr.mohamedshaneeznajmy@igmh.gov.mv) (M.S.N); [dr.mausool@igmh.gov.mv](mailto:dr.mausool@igmh.gov.mv) (M.M.S); dr.mohamedsunil@ighmh.gov.mv (M.S.);

2 Mahidol Vivax Research Unit, Faculty of Tropical Medicine, Mahidol University, Bangkok 10400, Thailand; pyaelinn.aun@mahidol.ac.th (P.L.A.); wang.ngu@mahidol.edu (W.N.)

3 Thai Travel Clinic, Hospital for Tropical Diseases, Bangkok 10400, Thailand; thundon.nga@mahidol.ac.th (T.N.); wasin.mat@mahidol.edu (W.M.)

4 Center for Infectious Disease Education and Research, Department of Viral Infections, Research Institute for Microbial Diseases, Osaka University, Suita 565-0871, Osaka, Japan; shioda@biken.osaka-u.ac.jp (T.S.)

5 Trauma and Emergency, Indhira Gandhi Memorial Hospital, Malé 2002, Maldives; [dr.rimsharafeeu@igmh.gov.mv](mailto:dr.rimsharafeeu@igmh.gov.mv) (R.R.); [dr.aishathsofamoosa@igmh.gov.mv](mailto:dr.aishathsofamoosa@igmh.gov.mv) (A.S.M.)

6 Department of Medicine, Indhira Gandhi Memorial Hospital, Malé 2002, Maldives; [ahmedshaheed@igmh.gov.mv](mailto:ahmedshaheed@igmh.gov.mv) (A.S.)

7  Department of Clinical Tropical Medicine, Faculty of Tropical Medicine, Mahidol University,   
Bangkok 10400, Thailand

8 Department of Molecular Tropical Medicine and Genetics, Faculty of Tropical Medicine, Mahidol   
University, Bangkok 10400, Thailand

**\*** Correspondence: hishamahmed.ima@mahidolac.th or imad@biken.osaka-u.ac.jp

**Table S1 Antibiotic sensitivity pattern of *S. aureus* isolated from blood culture after 72 hours of incubation.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Organism** | **Antibiotic Class** | **Antibiotics** | **MIC (µg/mL)** | **Interpretation** |
| *Staphylococcus aureus* | Beta-lactam | Oxacillin | ≥ 4.0 | Resistant |
| *Staphylococcus aureus* | Beta-lactam | Benzylpenicillin | ≥ 0.5 | Resistant |
| *Staphylococcus aureus* | Aminoglycoside | Gentamicin | ≤ 0.5 | Sensitive |
| *Staphylococcus aureus* | Quinolone | Ciprofloxacin | ≤ 0.5 | Sensitive |
| *Staphylococcus aureus* | Fluoroquinolone | Levofloxacin | 0.25 | Sensitive |
| *Staphylococcus aureus* | Glycopeptide | Vancomycin | 1.0 | Sensitive |
| *Staphylococcus aureus* | Oxazolidinones | Linezolid | 2.0 | Sensitive |
| *Staphylococcus aureus* | Antimycobacterials | Rifampicin | ≤ 0.03 | Sensitive |
| *Staphylococcus aureus* | Glycycline | Tigecycline | ≤ 0.12 | Sensitive |
| *Staphylococcus aureus* | Lipopeptide | Daptomycin | ≤ 1.0 | Sensitive |
| *Staphylococcus aureus* | Tetracycline | Tetracyclines | ≤ 1.0 | Sensitive |
| *Staphylococcus aureus* | Lincosamide | Clindamycin | ≤ 0.5 | Sensitive |

MIC: Minimal inhibitory concentration

|  |  |
| --- | --- |
|  |  |
| (**a**) | (**b**) |

**Figure S1**. Computed tomography images depicting the coronal view of the brain (**a)** Bilateral multiple subcortical hypodense foci representing infarctions (**b**) Unilateral hyperdense foci consistent with hemorrhagic transformation.