

Case report of a *Cupriavidus gilardii* pneumonia in an immunocompetent elderly

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ABSTRACT

Introduction: *Cupriavidus Gilardii* is an aerobic organism that has been isolated from various ecological niches. In previous reports, *Cupriavidus Gilardii* has been related to opportunistic infections. However, there are a few case reports of *Cupriavidus Gilardii* affecting patients with no obvious immunodeficiency, especially elderly. **Case Description:** A healthy 75-years-old lady, presented with one-week history of lethargy started from her family trip to Thailand. She was treated for pneumonia with intravenous ceftriaxone and oral azithromycin after return to Malaysia. Nevertheless, her condition deteriorated and intubated. Antimicrobial treatment was empirically escalated to intravenous meropenem. Blind bronchial aspiration grew *Cupriavidus Gilardii*, which was only sensitive to trimethoprim-sulfamethoxazole. Antimicrobial therapy was adjusted to intravenous colistin, and oral minocycline instead of trimethoprim-sulfamethoxazole based on previous case report antimicrobial susceptibility, as patient developed kidney injury, requiring renal replacement therapy. Unfortunately, her condition deteriorated further due to new bout of sepsis with *sternotrophomonas maltophilia* pneumonia. Antibiotics were changed to intravenous ciprofloxacin with oral minocycline based on the culture sensitivity. However, patient still succumbed to multiple bouts of sepsis. **Discussion:** There are total of 8 cases reported coupled with the case report here, 4 out of 9 patients (44%) succumbed to death. Two of the fatal case reports were associated with aspergillosis infection. The antimicrobial susceptibility varies among each case, however mostly sensitive to trimethoprim-sulfamethoxazole, levofloxacin/ ciprofloxacin. *Cupriavidus Gilardii* organisms also showed their ability to acquire resistance to antibiotics after administration. Combination of antimicrobial treatment should be further evaluated to prevent intrinsic antimicrobial resistance.