

The First Reported Case of *Burkholderia contaminans* in Patients with Cystic Fibrosis in Ireland - From the Sargasso Sea to Irish Children

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ABSTRACT

Burkholderia contaminans is an emerging pathogen in the cystic fibrosis (CF) setting. Included in the *Burkholderia cepacia* complex (Bcc), *B. contaminans* is a Gram negative, motile, obligate aerobe previously classified as a pseudomonad. Previous reports have described *B. contaminans* isolation from patients in Portugal, Switzerland, Spain, Argentina and the USA. This, however, is the first report relating to *B. contaminans* affecting Irish patients with CF, initially detected in a paediatric setting.

Burkholderia contaminans was identified in the routine analysis of sputum from a fourteen year old boy, at his annual review and subsequently from the sputum from his 19 year old brother. *RecA* gene sequencing and pulsed field gel electrophoresis (PFGE) were unable to distinguish between the isolates, which demonstrated with susceptibility to ciprofloxacin, cotrimoxazole, meropenem, piperacillin/tazobactam and ceftazidime. Both isolates were resistant to aztreonam, with reduced susceptibility to tobramycin. Following treatment with intravenous meropenem and ceftazidime, oral ciprofloxacin and nebulised tobramycin for 6 weeks, sputum specimens from both patients were negative for *B. contaminans*. No other member of the local CF cohort proved positive.

Bcc bacteria are associated with poor prognosis in CF and decreased life expectancy, specifically leading to a more rapid decline in lung function and, in some cases, to a fatal necrotizing pneumonia known as the "cepacia syndrome". Some species exhibit innate resistance to multiple antimicrobial agents and their transmission rate can be high in susceptible patients. In that context, we describe the first incidence of CF-related *B. contaminans* in Ireland and its successful eradication from two patients, one paediatric, using an aggressive antimicrobial regimen.

SOURCE

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