

Cellulosimicrobium Bacteremia in a Patient With Small Cell Lung Cancer: Emergence of a New Gram-Positive Branching Rod

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A 64-year-old male with a history of esophageal adenocarcinoma, placement of a spinal stimulator, cervical and lumbar fusions, and stage IV small cell lung cancer on palliative chemotherapy with carboplatin and etoposide, presented to the hospital with neutropenic fever. He reported intermittent fevers prior to admission and had episodic fevers with a $T_{max} = 38.2^{\circ}$ throughout his hospitalization. Ocular examination revealed no evidence of endophthalmitis or keratitis. Oral examination revealed no tongue ulcers, and an abdominal examination revealed no tenderness. He was empirically placed on cefepime and vancomycin. Chest x-ray revealed multifocal pneumonia. His neutropenia recovered on hospital day 2, but his fevers persisted and were attributed to pneumonia and possible bacteremia. On hospital day 3, initial blood cultures revealed a branching gram-positive rod. The initial suspicion for a causative agent was *Nocardia* or *Actinomyces*; vancomycin was discontinued and intravenous trimethoprim-sulfamethoxazole and meropenem were initiated. The blood cultures were identified as *Cellulosimicrobium* species on hospital day 11; his meropenem was discontinued and vancomycin was initiated. A transthoracic echocardiogram did not reveal endocarditis, and the patient was discharged on hospital day 24 and completed a 14-day total course of vancomycin. *Cellulosimicrobium* spp. is an emerging pathogen that has been described as an opportunistic infection in immunocompromised hosts. This case highlights *Cellulosimicrobium* spp. as an opportunistic pathogen, especially in immunocompromised individuals as a source of secondary bacteremia. It emphasizes that *Cellulosimicrobium* spp. should be considered in a differential diagnosis as it is an emerging pathogen with increasing prevalence.