

Brevibacterium

Brevibacterium species, which may resemble [Corynebacterium](#), were previously considered contaminants when isolated from clinical specimens.

The genus Brevibacterium includes many species but only nine have been isolated from humans: *B. linens*, *B. iodinum*, *B. epidermidis*, [Brevibacterium casei](#), *B. mcbrellneri*, *B. otitidis*, *B. paucivorans*, *B. massiliense* and *B. sanguinis*. Brevibacterium species were thought to be apathogenic until 1991, when the first case of sepsis due to *B. epidermidis* central line-associated blood stream infection was reported by McCaughey ¹⁾.

Though infrequently reported, Brevibacterium species are now well-recognized pathogens causing infections in immunocompetent and immunocompromised patients ^{2) 3)}

These infections include sepsis, peritonitis, skin, and soft tissue infections, and device-related infections, i.e. catheter-related bloodstream infections and prosthetic valve endocarditis. [Brevibacterium casei](#) is the most commonly reported species of Brevibacterium isolated from clinical specimens ⁴⁾

Talento et al. present a case of Brevibacterium otitidis [infection](#) in an immunocompetent patient, and highlight the difficulty with identification and interpretation of antimicrobial susceptibility results for this unusual pathogen ⁵⁾.

Diagnosis

Brevibacterium species can be differentiated from other coryneform bacteria by testing a wide array of biochemical reactions. The presence of meso-diaminopimelic acid in the peptidoglycan layer of the cell wall of Brevibacterium species and strong, rapid methane-thiol production are helpful in confirming identification of this genus but these tests are rarely available in the clinical diagnostic laboratory setting ⁶⁾.

Treatment

Brevibacterium spp. was not considered human pathogens until few cases were published in the literature. All reported cases treated with combination of various antibiotics, especially glycopeptides and quinolones.

Case reports

The cases of Brevibacterium brain abscess and osteomyelitis occurred in immunocompetent healthy

patients with no apparent predisposition ^{7) 8)}

A case of *Brevibacterium* tibial osteomyelitis in an immunocompetent individual with implanted hardware and highlight the challenge of identifying the organism and recognizing it as a potential pathogen ⁹⁾

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McCaughey C, Damani NN. Central venous line infection caused by *Brevibacterium epidermidis*. J Infect. 1991 Sep;23(2):211-2. doi: 10.1016/0163-4453(91)92451-a. PMID: 1753126.

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Brazzola, P., Zbinden, R., Rudin, C., Schaad, U. B. & Heininger, U. (2000). *Brevibacterium casei* sepsis in an 18-year-old female with AIDS. J Clin Microbiol 38, 3513-3514.

³⁾

Ulrich, S., Zbinden, R., Pagano, M., Fischler, M. & Speich, R. (2006). Central venous catheter infection with *Brevibacterium* sp. in an immunocompetent woman: case report and review of the literature. Infection 34, 103-106

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Gruner, E., Steigerwalt, A. G., Hollis, D. G., Weyant, R. S., Weaver, R. E., Moss, C. W., Daneshvar, M., Brown, J. M. & Brenner, D. J. (1994). Human infections caused by *Brevibacterium casei*, formerly CDC groups B-1 and B-3. J Clin Microbiol 32, 1511-1518

⁵⁾

Talento AF, Malnick H, Cotter M, Brady A, McGowan D, Smyth E, Fitzpatrick F. *Brevibacterium* otitis: an elusive cause of neurosurgical infection. J Med Microbiol. 2013 Mar;62(Pt 3):486-488. doi: 10.1099/jmm.0.043109-0. Epub 2012 Dec 6. PMID: 23222861.

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Bonavila Juan C, Michelena Bengoechea A, Zubeltzu Sese B, Goenaga Sánchez MÁ. Endocarditis recidivante por *Brevibacterium casei*: a propósito de un caso y revisión de la literatura [Recurrent endocarditis due to *Brevibacterium casei*: case presentation and a review of the literature]. Enferm Infecc Microbiol Clin. 2017 Feb;35(2):127-128. Spanish. doi: 10.1016/j.eimc.2016.05.002. Epub 2016 Jul 2. PMID: 27381296.

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Asai N, Suematsu H, Yamada A, Watanabe H, Nishiyama N, Sakanashi D, Kato H, Shiota A, Hagihara M, Koizumi Y, Yamagishi Y, Mikamo H. *Brevibacterium paucivorans* bacteremia: case report and review of the literature. BMC Infect Dis. 2019 Apr 25;19(1):344. doi: 10.1186/s12879-019-3962-y. PMID: 31023246; PMCID: PMC6485150.

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Eidensohn Y, Wei A, Sirkin M, Dever LL. *Brevibacteria* tibial osteomyelitis. IDCases. 2021 Jan 12;23:e01046. doi: 10.1016/j.idcr.2021.e01046. PMID: 33511032; PMCID: PMC7815998.

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