AN EMERGING PATHOGEN? *LEPTOTRICHIA TREVISANII* SEPSIS IN FEBRILE NEUTROPENIA

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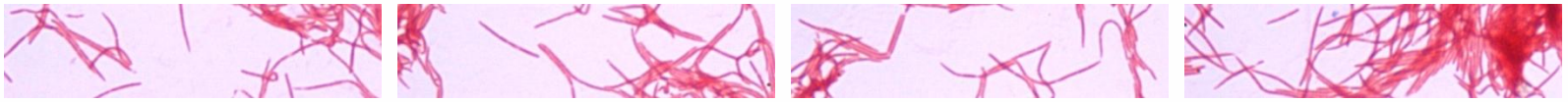
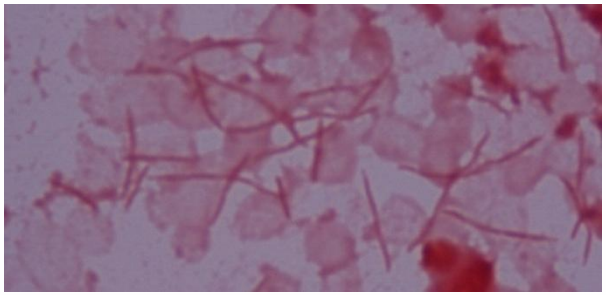


Introduction: Leptotrichia spp. were the initial microbes seen by van Leeuwenhoek in 1683. Only recently have Leptotrichia been recognized as pathogens. Little information is available in the literature. These aerotolerant, anaerobic, fusiform gram negative rods are normal flora of mouth, GI tract and vagina. Neutropenic patients with mucositis have been known to develop *L. buccalis* sepsis, but recently *L. trevisanii* has been shown to cause sepsis in this setting. Timely recognition allows effective treatment, but clinician and microbiologist suspicion is required due to conventional identification difficulties and delays with 16S rRNA sequencing. Currently, there are only two published case reports of *L. trevisanii* bacteremia. We recently identified four patients with Leptotrichia bacteremia over the past year; two of which were *L. trevisanii* and are described here.

Case reports: *Patient 1*, a 63 year-old with IgGκ multiple myeloma, was treated with melphalan and autologous stem cell transplantation (SCT). On day 8 post-SCT, he developed mucositis and febrile neutropenia while on levofloxacin. Blood cultures were drawn and grew anaerobic GNR two days later. He remained intermittently febrile despite line removal and treatment with meropenem and vancomycin. Six days later, he was again febrile and was switched to ertapenem with resolution of fever. *L. trevisanii* was identified on day 9 by16S rRNA sequencing. *Patient 2*, a 56 year-old with myelodysplastic syndrome, had a matched sibling donor SCT. Eight months later, she developed acute myelogenous leukemia. After induction therapy, she developed mucositis and febrile neutropenia while on levofloxacin. Blood cultures grew *L. trevisanii*, again confirmed by 16S rRNA sequencing. She remained afebrile after line removal and treatment with cefepime.



Discussion: Leptotrichia spp. may cause up to 16% of anaerobic bacteremias in patients with hematologic malignancies. Leptotrichia spp. are generally resistant to quinolones, a mainstay of antibacterial prophylaxis in neutropenic patients. Delays in identification require early suspicion for initiation of effective therapy, especially in the febrile, neutropenic patient with mucositis.

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Photos:
Gram stains of *Leptotrichia trevisanii* from solid media (top) and positive blood culture (above) both courtesy of Marsha Wilson, MT.

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