



Medical Imagery

Detection of *Bordetella trematum* in a diabetic patient with a skin and soft tissue infection

Case report

A 38-year-old obese male with spastic diplegia and diabetes was hospitalized due to progressive ulcers of both lower extremities (Figure 1A). Computed tomography showed subcutaneous inflammation with suspected fascial involvement. The patient underwent surgical debridement, after which clindamycin was started empirically. Cultures from tissue samples grew gram-negative rods, identified by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS) as *Bordetella trematum* (Figure 1B) and, in minor quantity, *Myroides odoratimimus*. Antimicrobial susceptibility testing of *B. trematum* was performed to obtain minimal inhibitory concentrations (in µg/mL; ampicillin ≤2; piperacillin ≤4; cefuroxime ≥64; ceftazidime 4; meropenem ≤0.25; moxifloxacin 2).

Following the debridement, the patient's condition improved substantially (Figure 1C), and he was discharged soon thereafter.

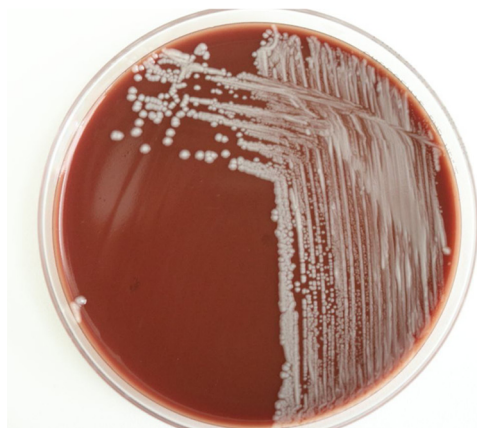
Discussion

Bordetella trematum is a gram-negative rod (Vandamme et al., 1996), which is rarely isolated from clinical specimens. A recent literature review identified nine cases of human *B. trematum* infections (Y Castro et al., 2019), most of which were associated with polymicrobial infections of chronic ulcers (Daxboeck et al., 2004; Almagro-Molto et al., 2015). However, severe systemic infections have also been reported (Majewski et al., 2016). The advent of MALDI-TOF MS enables a more reliable identification and might elucidate the 'true' epidemiology of *B. trematum* infections. An increased awareness is essential to

(A)



(B)



(C)



estimate the importance of *B. trematum* as a potentially emerging pathogen.

Patient consent

Written informed consent was obtained from the patient.

Funding source

None.

Conflict of interest

The authors declare no conflicts of interest.

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Corresponding Editor: Eskild Petersen, Aarhus, Denmark

Received 6 August 2019

Received in revised form 21 August 2019

Accepted 22 August 2019

Figure 1. (A) Multiple ulcers on the left foot and lower leg of an obese diabetic patient, with adjacent redness and swelling; (B) colonies of *Bordetella trematum* grown from tissue samples of these lesions, as seen after 24 h of incubation on chocolate agar; and (C) clinical evolution of the lesions ten days after debridement.