



Solobacterium moorei bacteremia in a patient with Fournier's gangrene

Manuela Hernández Blanco¹, José Javier Costa¹, Antonio Aguilera¹, Tamara Manso¹, Guadalupe Abal-Morrazo¹, Pablo LopezPais², Pablo Otero Castro², Julián Álvarez², María Luisa Pérez del Molino.¹
Servicio de Microbiología y Parasitología¹. Servicio Anestesiología y Reanimación². Complejo Hospitalario Universitario de Santiago de Compostela. (Spain).

Background/Objective: Fournier's gangrene (FG) is a polymicrobial necrotizing fasciitis of the perineum and genital area. Characteristically, FG exists due to the synergism between several bacteria, which are not so aggressive when presented separately. *Solobacterium moorei* is a non-spore-forming strict anaerobic Gram-positive bacillus initially isolated from human feces and recognized with the use of 16S rRNA gene sequencing. In the last decade, *Solobacterium moorei* has been associated with halitosis and has been isolated from endodontic infections, periradicular injuries, and subgingival plaques from patients with refractory periodontitis. There are only a few reports of infections outside the oral cavity. The objective is to describe the first case of *Solobacterium moorei* bacteremia in a patient with Fournier's gangrene.

Material/methods: A 56-year-old man came to the emergency department at our hospital presenting general malaise of 4 days of evolution. He referred discomfort in external genitalia for the last 2 days, but denied any evidence of previous injury. The BACTEC 9240 system for blood cultures (Becton Dickinson) was used. Isolates were identified by mass spectrometry (MALDI TOF). The identification results were confirmed by 16s rRNA gene partial sequencing. The antimicrobial susceptibility was performed by E-test according to the CLSI criteria for anaerobes.

Results: After 5 days of incubation, an anaerobic blood culture bottle became positive and a short Gram positive bacillus was founded. This bacillus grew on blood agar plates under anaerobic conditions after 4 days at 37 °C. Both MALDI-TOF and 16s rRNA partial gene sequencing method identified the microorganism as *Solobacterium moorei*. The antibiogram showed susceptibility to penicillin, piperacillin-tazobactam, ertapenem and moxifloxacin. *Proteus mirabilis*, *Escherichia coli*, *Enterococcus faecalis* and *Bacteroides ovatus* were isolated from the necrotic tissue sample.

Conclusions: MALDI TOF was similar to 16s rRNA sequencing for identifying *Solobacterium moorei*. This is the first described case of *Solobacterium moorei* bacteremia in a patient with Fournier's gangrene. It could be speculated that the bacteria entered the blood from the gangrenous place. *Solobacterium moorei* produces volatile sulfur compounds. The toxic effects of these compounds are well documented and it would be possible that they contribute to the pathology of these patients.

