En nuestro caso, la farmacoterapia previa a la cirugía redujo considerablemente la lesión y minimizó las secuelas estéticas.

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Streptobacillus moniliformis bacteraemia: A case report

Bacteriemia por Streptobacillus moniliformis*: a propósito de un caso*

Dear Editor:

Streptobacillus moniliformis is a fastidious, pleomorphic, Gram-negative rod that is part of rodents' upper respiratory tract microbiota. *S. moniliformis* as well as *Spirillium minus* cause "rat-bite fever" (RBF) disease.[1]

Here we report a case of bacteraemia and possible infectious endocarditis due to *S. moniliformis*. A 31-year-old man was admitted to the emergency department after a two-week history of fever and unspecific cutaneous lesions in some fingers and feet. He had little dotted lesions in both hands located only on the fingers but not on the palms. There were also other unspecific lesions on the sole of the feet. Blood samples were collected to perform further serologic studies. Considering that the patient general condition was good, he was discharged under paracetamol therapy and he was referred to the infectious diseases outpatient department. One week later, the patient returned to the hospital because of persistent fever as well as the appearance of arthralgia and additional skin lesions. After examining the patient, one and two millimetre-sized petechial and purpuric lesions were found on both hands (fingers and palms) and feet (the right toe and the left heel). Some of them were slightly bigger and similar to Osler's nodes. Neither cellulitis nor oedema was observed. Empiric therapy was started with intravenous (IV) ceftriaxone 2 g/24 h due to infectious endocarditis suspicion.

The initial peripheral blood analysis (obtained one week before) and the new analysis results demonstrated normocytic anaemia, thrombocytosis, C-reactive protein value of 15 mg/L, erythrocyte sedimentation rate of 40 mm/h and normal values of rheumatoid factor, and serologic studies were negative (HIV, hepatitis, toxoplasma and *Treponema pallidum* serologies). Histopathological studies of skin lesions found small thrombi causing occlusive vasculopathy. Neither the ophtalmoscopic exam nor the transthoracic echocardiogram revealed any abnormalities.

Gram stain of the blood cultures (positive after 20 h incubation) showed thin and long Gram-negative bacilli. Microorganism identification directly from blood culture using MALDI-TOF mass spectrometry was not achieved. After a 72-h incubation under capnophilic atmosphere, small and greyish colonies grew on sheep blood agar subculture. Those colonies were identified using MALDI-TOF analysis as *S. moniliformis* with a 1.95 score. Identification by 16S rRNA PCR and sequencing yield a 709 bp amplified fragment that shared 99% identity with *S. moniliformis* ATCC49940 (acc. num. KP657489.1). Susceptibility testing was performed by the gradient diffusion (Etest) and disk-diffusion methods on sheep blood agar plates. The isolate was susceptible to penicillin (MIC: 0.03 mg/L), cefotaxime (MIC: 0.012 mg/L), imipenem (MIC: 0.012 mg/L), tetracycline (MIC: 0.38 mg/L) and ciprofloxacin (MIC 0.19 mg/L) and was resistant to aminoglycosides (MICs: tobramycin 8 mg/L, amikacin 32 mg/L and gentamycin 4 mg/L), colistin (MIC: 32 mg/L) and co-trimoxazole (MIC: >32 mg/L), in agreement with previous reports.[1–3]

Since penicillin-resistance in *S. moniloformis* is extremely rare, the recommended treatment is penicillin.[1,2,5] In our case, the empirical treatment with IV ceftriaxone 2 g/day was prolonged for four weeks due to its proved clinical efficacy against *S. moniliformis*, and the patient cured.[4,5] Without proper treatment, the mortality associated to this disease is approximately 10%.[1,3,4] In this case the patient could have presented a typical RBF onset (fever, polyarthralgias and polymorphic cutaneous lesions in both hands and feet[1,3–5]); however, it was also difficult to distinguish between RBF and possible endocarditis.[6] Indeed, positive results of 2 separate blood cultures with *S. moniliformis* (a microorganism with the ability to cause infective endocarditis) as major criteria, and the presence of fever, vascular (determined by histopathology) and immunological phenomena (Osler nodes-like) as minor

criteria, posed concerns for the existence of possible infective endocarditis.

After knowing the blood culture results, the patient was asked about animal contact. He explained he had four dogs, two cats and two domestic rats, but he did not remember being bitten recently. Rats and other rodents are the main reservoir of *S. moniliformis* and its bite is directly related with RBF. Moreover, It can also be transmitted by contact with its saliva, excrements or through other colonized pets.[1,3,4] No history of animal bites, which is the case of our patient, have also been reported by nearly 30% of the patients.[2,5] Although, the incidence of RBF in Spain is unknown, several cases have been reported (three cases of bacteraemia and other cases of arthritis, abscesses and wound infection) after rodents' bite.[2] Overall, this case emphasizes the need for a high clinical suspicion and a well-addressed anamnesis, which was indeed performed inaccurately here, in order to diagnose this infectious disease.

S. moniliformis is a fastidious bacillus that requires microaerobic atmosphere (5–10% CO_2), long incubation period (2–7 days) and culture media with blood for its growth. In blood cultures it is inhibited by the presence of sodium polyanethol sulfonate (used as an anticoagulant in some blood cultures) but it is not affected by the presence of resins in the media.[1–5] The incorporation of MALDI-TOF analysis in clinical Microbiology departments has reduced the time needed for optimal bacterial identification in such a fastidious microorganism.[3] If there is a high clinical suspicion of RBF and difficulties in culturing samples, diagnosis carried out by 16S rRNA PCR analysis can be done.[1,3,5]

In conclusion, infections caused by *S. moniliformis* in Spain are rare; ours is the fourth case of bacteraemia reported. History of rodent contact and high clinical suspicion are essential in order to adapt laboratory protocols and to improve microbiological diagnosis and patient outcome.

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Traveller's diarrhoea by *Vibrio cholerae* in patients returning from the Dominican Republic

Diarrea del viajero por Vibrio cholerae *en pacientes que regresan de República Dominicana*

Dear editor,

According to WHO and European Centre for Disease Control, only thirteen imported cases of cholera have been notified by Spain in the last 15 years, the last one in 2013. On August 20, 2015, *Vibrio cholerae* was isolated from two immunocompetent female patients (47 and 62 years-old) returning from Dominican Republic (DR). No patient had previously received the cholera vaccine. Both patients showed acute and watery diarrhoea (12–15 stools/day, no blood and mucus), nausea, abdominal pain, and malaise. They had returned from a tourism trip to Bonao (DR) four days before, where they had stayed for 15 days. Physical examinations were normal, except for lightly dehydrated mucoses and skin. Laboratory analysis revealed hypokalemia and altered C-reactive protein. The patients informed the physician that a cholera outbreak had recently been detected in Bonao. This was related to drinking contaminated water from Masipedro river. They had not drunk contaminated water (only bottled water) or drinks with ice cubes, but they had swum in the Masipedro river during their stay. This information was notified as suspected cholera cases to the public health authorities. A blood and faecal culture from each patient were sent to the microbiology department. Intravenous fluids, metoclopramide and antibiotic treatment (Doxycycline 100 mg for 3 days) were started. They remained afebrile and this led to quick recovery from their gastroenteritis.

Because of the epidemiological background, testing for *V. cholerae* was included [enriched alkaline peptone water (1% NaCl pH 8.5) and selective thiosulfate citrate bile salts sucrose (TCBS) agar (Becton–Dickinson)]. The TCBS showed yellow colonies (sucrose fermenting) which were identified as *V. cholerae* by API20E® (99.0%, Bionumber: 5346120; bioMérieux) and MALDI-TOF MS (score 1.53; Brucker Daltonics). The isolates reacted with polyvalent anti-O1 antisera (BD Difco™ *V. cholerae* antisera, Becton–Dickinson). They were resistant to the O/129 vibriostatic agent 150 μg (Thermo Scientific Oxoid). The isolates were confirmed as *V. cholerae* O1 biotype El Tor serotype Ogawa in the National Centre for Microbiology. Moreover, the presence of virulence determinants and toxin coding genes were detected by PCR.[1] Pulsed-field gel electrophoresis[2] and