

First isolation of *Mycobacterium canariasense* in a child



Primer aislamiento de *Mycobacterium canariasense* en un niño

Mycobacterium canariasense is a rapidly growing, non-pigmented mycobacteria. The first report published was in 2004 and *Mycobacterium canariasense* was isolated from blood samples of 17 patients carrying a central venous catheter, most of them presenting also a malignant disease. Its name is due to the Spanish islands where it was first isolated.¹ Here, we present the first case of catheter-related bacteremia in a non-immunosuppressed child.

A 4-year-old girl with a recent history of otitis media treated with amoxicillin-clavulanate was admitted to our hospital with a 7-day history of severe headache and vomiting. No findings were found on a cranial computed tomography scan but a left otomastoiditis and adjacent cerebellar abscess were observed on a brain magnetic resonance imaging. *Fusobacterium necrophorum* was isolated from the abscess and brain tissue samples and the patient was subsequently treated with metronidazole for 27 days and topical ciprofloxacin.

During the stay, the patient presented fever after manipulation of a jugular central venous catheter placed 28 days ago. Central and peripheral blood cultures were collected and the central catheter was removed.

Blood culture aerobic bottles (BD BACTEC™ FX) were positive at 2 days and 19 h inoculated with blood obtained through the catheter, and at 3 days and 18 h with blood obtained by venipuncture. Pleomorphic Gram-positive bacilli were observed on the Gram stain and a Ziehl-Neelsen stain was also performed, demonstrating acid-alcohol resistant bacilli. Blood cultures were seeded on blood and chocolate agar and there was growth after 48 h of incubation at 37 °C. The catheter was opened longitudinally and the content was spread with a swab on blood agar as routinely performed in our laboratory for children and new-borns catheters.² Growth (>100 CFU) occurred in 72 h.

The identification of the microorganism isolated from the catheter and from central and peripheral blood cultures was realized by matrix-assisted laser desorption/ionization-time-of-flight mass spectrometry (MALDI-TOF MS) (Maldi Biotyper® Bruker Daltonics) resulting in *Mycobacterium canariasense* with a score value of 2.4. Additionally, a *Bst*EII pattern of 320/130 bp and a *Hae*III pattern of 140/90/80 bp, corresponding to *Mycobacterium canariasense* type 1 at the PRASITE database (<http://app.chuv.ch/prasite>, last accession 25/05/2020) was obtained by PCR-restriction fragment length polymorphism analysis of the *hsp65* gene.³

Antimicrobial susceptibility was performed by gradient diffusion with the MIC test Strip (Liofilchem®) on Mueller-Hinton agar, according to Clinical and Laboratory Standards Institute (CLSI) criteria for Rapidly Growing Mycobacteria (RGM).⁴ The strain was susceptible to all the antibiotics tested (cefotaxime, imipenem, meropenem, tobramycin, amikacin, linezolid, ciprofloxacin and clarithromycin) except to azithromycin. The patient was treated with meropenem 720 mg/8 h (34 days), clarithromycin 135 mg/12 h (15 days) and amikacin 100 mg/8 h (5 days) and was discharged without antibiotic treatment, due to good clinical evolution.

Reviewing the literature, we have only found a few cases of catheter-related bacteremia in adults,^{5–8} a case of respiratory infection,⁹ a breast prosthetic infection¹⁰ and a septic non-union of the humeral shaft.¹¹

As in all of the bacteremia cases described in the literature,^{5–8} in our case, bacteremia was catheter-associated, with a semi-quantitative culture of the catheter tip > 100 CFU and the blood

culture sample drawn through the catheter positive 24 h before that obtained directly from peripheral venipuncture.

Regarding susceptibility testing, CLSI recommends broth microdilution as the reference method,⁴ but due to its complexity, gradient diffusion tests are an alternative. Our strain was susceptible to all the antibiotics tested except azithromycin. These data are in line with other reported cases, which resulted susceptible to all the antibiotics.^{7,8} Resistance to macrolides is reflected in the article of Paniz-Mondolfi et al. where clarithromycin showed intermediate sensitivity,⁶ our strain was susceptible to clarithromycin but the azithromycin MIC was > 256 µg/mL. It is necessary to study a large number of cases in order to obtain representative data of the antibiotic susceptibility of this species.

The patient recovered shortly after removal of the catheter without recurrence of mycobacteremia. In other published cases, most patients recovered after the treatment even without catheter removal. However, some patients died as a consequence of their underlying disease.^{1,7}

The case presented here confirms the ability of *M. canariasense* as an opportunistic pathogen and highlights the importance of a good management of catheters due to the high risk of suffering infections caused by environmental bacteria in both immunosuppressed and non-immunosuppressed patients.

Conflict of interest

The authors have no conflict of interest or source of funding.

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Coinfección por COVID-19 y gripe A: una cuestión de principios



COVID-19 and influenza A coinfection: a matter of principle

Sr. Editor:

En noviembre de 2019 surgió una nueva emergencia sanitaria en la ciudad de Wuhan ante el primer caso de infección por COVID-19 en el mundo¹, mientras España sufría su propia epidemia de gripe estacional. El primer paciente registrado en nuestro país con infección por coronavirus fue notificado por el Centro Nacional de Microbiología el 31 de enero de 2020 en La Gomera, tratándose de un turista alemán. Hasta el 24 de febrero no hay comunicación de casos a nivel de la Península, detectándose uno en Barcelona, igualmente como caso importado. Cada vez hay más voces que se atreven a afirmar que la epidemia de gripe A acontecida en nuestro país pudo enmascarar la llegada del virus semanas antes de lo confirmado en registros oficiales².

Presentamos el caso de una paciente ingresada en nuestro hospital el 18 de enero de 2020 por neumonía bilateral por gripe A en la que la determinación posterior, mediante prueba de PCR del exudado nasofaríngeo tomado a su ingreso, confirmaba la coinfección por COVID-19. Se trata de una paciente de 46 años, natural de Madrid, sin antecedentes epidemiológicos de interés, que acude

tras comienzo de cuadro clínico el 13 de enero consistente en tos seca persistente precipitada por las excursiones respiratorias, fiebre de hasta 38 °C, artromialgias, postración importante y disnea progresivamente en aumento. En la exploración destaca una temperatura de 40 °C, tensión arterial 95/64, frecuencia cardíaca: 95 lpm, y saturación de O₂: 89%. Se ausculta rítmica sin soplos con crepitantes secos de despegamiento en ambos campos pulmonares. La analítica inicial presentaba 1.700 leucocitos/ μ L (1.100 neutrófilos, 500 linfocitos totales), hemoglobina 13 g/dL, hematocrito 36%, plaquetas 72.000, PCR de 1,5 mg/L, procalcitonina 0,09 ng/mL, ferritina 696 μ g/L, CPK 516 U/L, LDH 712 UI/L, GPT 59 U/L, GPT 32 U/L y GGT 20 U/L. No se disponía del resultado de D-dímeros. En la radiografía de tórax a su ingreso se apreciaba consolidación en lóbulo superior izquierdo y perihiliar derecha. La toma de un exudado nasofaríngeo confirma la infección por gripe A. El antígeno de neumococo y *Legionella pneumophila* serogrupo 1, así como el cultivo de esputo resultan negativos. Se inicia tratamiento con oseltamivir, oxigenoterapia y antitusivos. Por empeoramiento clínico y radiológico a los cuatro días del ingreso, con mayor extensión de la consolidación en el pulmón izquierdo y perihiliar derecha, informada como «empeoramiento del proceso infeccioso bilateral o inflamatorio del tipo de neumonía organizada», se asocia levofloxacino JUNTO con corticoides sistémicos (fig. 1) que conduce a una rápida respuesta clínica y radiológica, con normalización de los parámetros analíticos descritos, que permite alta hospitalaria con



Figura 1. Radiografía de tórax al cuarto día de ingreso: progresión de la consolidación en pulmón izquierdo y perihiliar derecha. Pequeño derrame plural bilateral.